KEEPING IN CONDITION

H. H. MOORE

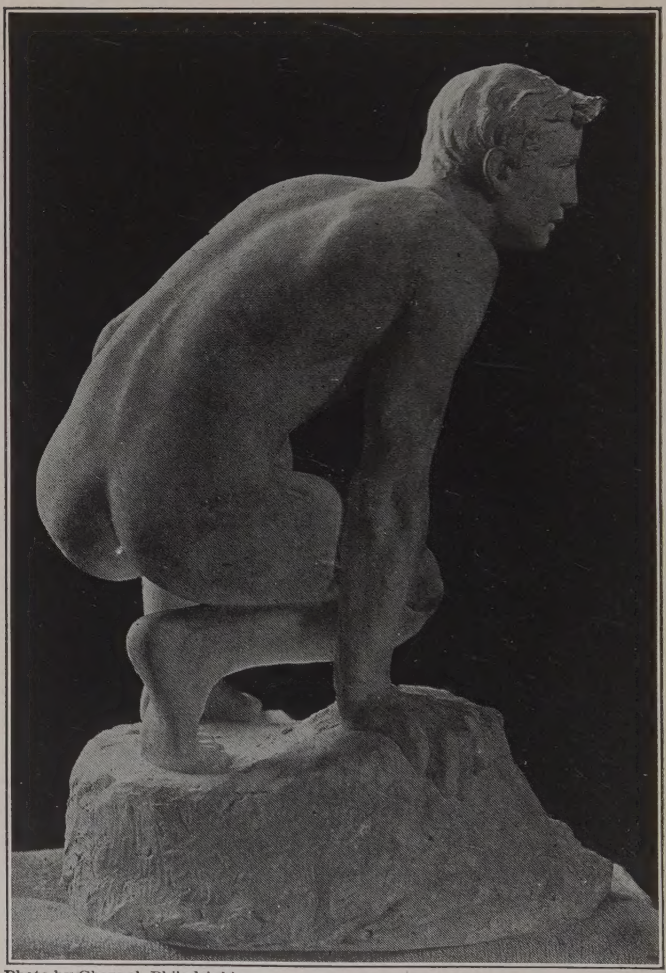

Photo by Chappel, Philadelphia.

The Relay Runner

A well-proportioned youth in position for the relay. Reproduction of a bronze figure by Dr. R. Tait McKenzie of the University of Pennsylvania. Used through the courtesy of Dr. McKenzie.

KEEPING IN CONDITION

A HANDBOOK ON TRAINING FOR OLDER BOYS

BY

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WITH AN INTRODUCTION BY

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INTRODUCTION

THIS book gives boys a practical guide for training in its larger sense of training for manhood. The essentials involved in training — exercise, fresh air, diet, rest, and "the control of inner force" — are interestingly explained and the fact emphasized that all of these essentials, not one or two of them, are necessary for real success. But Mr. Moore goes further and presents to boys, interested in their personal development and power, the method of realizing their manhood and the relation of this training to racial and national welfare.

The adult uses his physical, mental, and moral powers to make a living, to enter into social relationships with his fellow men, to carry on civic and political enterprises, to gain a deeper insight into the problems of the world, to find pleasure in recreation, and, above all, to care for his family if he has one. These are the functions of the grown man, but the boy has a function more fundamental than any of these and in that sense more important. This function is revealed by his interest in manly physical exercises and achievements. While freed from the larger responsibilities of adult life, it is the function of the boy to develop the powers that will be used in adult activities, such as vital and nervous energy, skill, will power, and courage. His interest in expending, or craving to expend, a large share of his energies in physical achievement is Nature's method of securing his development. This development cannot be secured

after maturity. At maturity the gates of all the more fundamental forms of education are closed. The adult can only conserve the powers his youth has given him.

There is yet a larger meaning to this ideal of training for manhood. It is related to our national progress and welfare. The realization that he is a link in the chain of heredity must appeal to every boy. Through parents, grandparents, and great-grandparents he is linked to the past, clear back to the beginning, and he has the opportunity to be linked to the future through possible children and children's children, on to the end of time. His body, as Mr. Moore shows, is a trust, and his right to use his capacity to give life depends upon his conservation of his trust and upon his self-mastery; for the race must not suffer from the misuse of his energies or impulses. Those to whom he may give life in the future have a right to the vigor, steady nerves, and clear brain of a wise ancestor. In making this fact clear, the author connects the boy's ideal for himself with the racial idea.

Many boys feel that the good old days of adventure and achievement of personal glory are no more. For the crude and untrained, they are past; but for the boy who develops the highest vigor, the strongest nerves, the clearest brain, and the steadiest moral courage there never was a time in the history of the world so full of opportunities for achievement. Every city and town offers its Golden Fleece in the form of some civic achievement that requires a finer type of courage and effort than that put forth by the Argonauts.

For parents and teachers this book is timely and suggestive. It shifts a large part of sex hygiene from a position of awkward isolation to its natural place as a phase of an idealized yet practical program of training — a training in which the boy's interests and enthusi-

asms are high. It points the way to a program of training now used by many expert leaders of boys to relieve them of the sex excitation and temptations which Jane Addams characterizes so clearly as part of the dangers of our present-day social life.

The boy lives in the enthusiasms of his daily experiences and achievements; he expresses impulses and emotions, and molds them into character habits. Whether the impulses and emotions are morally good or bad depends upon the ideas and ideals that control their expression. These ideas and ideals leadership must supply. It is the function of adult leadership to attach the ideal of training for manhood to the boy's enthusiasm in daily achievement. In this ideal of training to build a life, the parent's or teacher's enthusiasm may match the boy's enthusiasm and guide it into high and efficient effort.

CLARK W. HETHERINGTON.

UNIVERSITY OF WISCONSIN, MADISON,
May 8, 1915.

CONTENTS

PAGE

INTRODUCTION iii

PREFACE xiii

CHAPTER I. TRAINING AND VIRILITY 1
- What virility means 2
- Conservation of virility 3
- Examples of virility 4

CHAPTER II. FIVE ESSENTIALS IN SUCCESSFUL TRAINING 9
- Wise exercise 10
  - The best exercises 10
  - Excessive exercising 11
  - Posture 12
  - The bath 13
  - Rubdowns 14
- Fresh air 14
  - Results with fresh air 15
  - How to provide fresh air 15
- Sufficient rest 17
  - Effects of insufficient rest 17
  - Reserve strength 18
  - Sufficient rest profitable 18
- Wholesome food 19
  - Fads 19
  - What to eat 20

PAGE

What not to eat 20
Coffee 21
Alcohol and tobacco 21
Slow eating 22
Judgment 22
The control of internal force 24
The development of the boy into the man . . . 25
A danger to avoid 27
Relation of mind to virility 28
Patience in training 29
Summary 29

CHAPTER III. DANGERS TO VIRILITY 32
Tuberculosis 32
Colds 33
Typhoid Fever 34
Constipation 35
Venereal diseases 35
Worry 40
Emissions 40
Cautions 41
Local irritation 41
Varicocele 42
Quack doctors 42
Pimples 43
Drugs 43
Throat, eye, and teeth disorders 43

CHAPTER IV. TRAINING AND RACE PROGRESS 46
The reproduction of life 47
Reproduction in plant life 51
Reproduction in animal life 53

PAGE

Reproduction in human life 54
The transmission of characteristics 55
Characteristics already in the family 55
Possibilities of damaging the family stock . . 56
The transmission of standards of living . . . 57
The control of the sex instinct 57
The fight for control 59
Attitude towards womanhood 61

CHAPTER V. THE YOUTH AND THE NATION 64
National dangers call for virile men 64
The relation of training to this warfare 67
Various types of service 68
Choosing a vocation 72
A call to action 73

SELECTED BOOKS 77

NOTES 79

ILLUSTRATIONS

The Relay Runner . . . . . *Frontispiece*

Climbing a Snow Covered Mountain Peak . . . 7

Finish of a Sprint 11

A Refreshing Form of Exercise 40

Shooting a Rapids 61

A Worker in the Cotton Mills 65

PREFACE

Most youths of fourteen to eighteen years of age are ambitious to be strong and clean and vigorous. If a high standard of manhood is constantly before them, they will strive earnestly to achieve the qualities of manhood therein represented. They are eager for information which will explain how they may get their bodies into the best possible physical condition, how they may keep fit. While considerable material on athletic training, personal hygiene, and sex hygiene is now being published in books and magazines, no one has yet brought together in concise form for adolescent boys all the essentials of training for manhood.

This little book is an attempt to set up an ideal of vigorous manhood and to supply the youth with the necessary information for its achievement.

The author is indebted to many friends for much generous aid. He is especially grateful to President William T. Foster and Professor Norman F. Coleman of Reed College, and to Professor Carl Kelsey of the University of Pennsylvania for help in revising the manuscript. Others, too numerous to mention, members of the Executive Committee of The Oregon Social Hygiene Society, members of the faculties of Reed College and other institutions, secretaries of The Young Men's Christian Association, and High School boys — all have helped. If the book proves useful, it will be due to the generous aid of these friends.

H. H. M.

Reed College, Portland, Oregon,
July, 1915.

KEEPING IN CONDITION

A HANDBOOK ON TRAINING FOR OLDER BOYS

CHAPTER I

TRAINING AND VIRILITY

To be in training, to get the body into the best possible physical condition, to keep fit, is the natural ambition of every youth. A well-developed, well-proportioned human body is a thing of beauty and an inspiration. It is a marvelous organism, superior to any machine which ever has been or ever can be invented. It is an organism that is adjusted very delicately, yet we know that it will stand severe strain — a hard football game, a heavy day's work, or a charge on the trenches of the enemy, provided it is always kept in good condition.

"The war made the nation recognize the importance of physical fitness. During its first year over one-third of the drafted men were rejected because they were physically unfit. In a large proportion of cases they were unfit because they had not trained their bodies when they were boys. During the war 7,000,000 men and boys were killed. Many more were disabled. They were among the strongest and most vigorous in the world. The war necessitated a tremendous sacrifice of

manpower. Now the world must regain this loss. The young men and boys who have survived the war must earnestly set themselves to the task of physical training." [1]

By specialized, intensive training a man may become a great baseball player, football player, or a record breaker in the hundred yard dash. But the custom of training continuously for a few months each year for football, track and field work, baseball, tennis, or other sport is short sighted, compared with the custom of training for manhood. A wiser way is to keep in the best possible condition all the time. The thing to be achieved is that excellent condition known as fitness — fitness for athletics, for work, for any task which a man may be called upon to perform.[2]

So to keep in condition does not necessitate continuous, intensive, and specialized training, such as may cause a man to become "stale" or overtrained. It need not mean a rigid diet, from which there can be no variation, day after day, and month after month. It does not necessarily require a certain hour for retiring year in and year out. It does not mean the selection of those factors in everyday life which make for the best possible physical and mental health and the rejection of those factors which tend to prevent one from achieving complete health. *Training for manhood involves the development and conservation of virility.*

Every normal youth is ambitious to have virility. He would rather have full virility than a million dollars. At least this is true if he understands all that virility means.

What Virility Means.— By virility is meant manhood in a complete sense. It is made up of at least six qualities. Of course it includes *strength of muscle*

— not necessarily big muscle, but muscle that will do any work one may have for it, whether it be hiking, wrestling, or pitching grain in the field. Quality of muscle rather than quantity is desirable. There is such a thing as having too much muscle. John L. Sullivan is said to have had so much muscle that he could not reach the collar button at the back of his neck. Sandow, famous for his great muscular strength, was unusually slow and inaccurate in using his body.

While strong muscle is important, a considerable number of men who have built up tremendously strong muscles on the outside of their bodies have "lost out" in competition, because they have lacked inner qualities of virility.[3] One of these inner qualities may be shown by comparing two runners. They may be placed side by side in track suits, submitted to various strength tests and measurements, and apparently be of equal strength. But placed together on a mile course, one man shows himself weaker than the other. At the end of the first half mile he becomes exhausted and has to quit. He lacks staying quality, or reserve force. The other possesses this quality and finishes in good condition. This quality is called *endurance.*

A third quality is *energy.* Without it, a man is lazy. Unless he be exceptionally strong in other particulars to compensate for this almost inexcusable weakness, his school has no use for him in baseball, basketball, or track and field athletics. Energy means activity, and activity results in the development of one's powers.

Two other qualities of great importance in after life are sometimes demonstrated at critical moments in athletics. At such times, one player, muscular, energetic, and enduring though he may be, seems helpless. Another player, calm and determined, meets the emer-

gency and wins victory for his team. He shows *self-control* and *will power,* two other qualities necessary to virility.

Courage, the last quality, is shown at moments of great peril. It is a quality which may not be conspicuous every day. Yet it gives a man power not possessed by the man without it. When cowards, more concerned for themselves than for the welfare of their friends, retreat to positions of safety, the man of courage will risk life itself for friends and honor.

At least six qualities, then, are necessary to those of us who would be virile — strong muscle, endurance, energy, courage, self-control, and will power.

Conservation of Virility.— In earlier times it was assumed that there was in the United States an inexhaustible supply of timber, coal, metals, and other forms of natural wealth, and for years millions of dollars' worth of these resources were wasted. Now it is realized that this wealth is limited, and any waste in its use is condemned. The conservation movement is a protest against waste, and is based on the idea of saving for future use.

If, in the development of the nation, it is important to conserve our natural resources, it is much more important to conserve the great vital forces in human life, especially the vital forces of youth. Those things which waste the strength and energies of youth are to be regarded as much greater dangers to the welfare of the nation than business activities which endanger our forests, soil, mines, and water power. He who trains for manhood conserves the great vital forces in human life.

Examples of Virility.— Most men of recent years and of the past who have won great records in athletics

and who, by their intellectual powers and physical abilities, have rendered great service in the world's work have possessed these six qualities of virility.[3]

Henry Ward Camp, who rowed with Yale in the great Quinsigamond Regatta in 1859, was such a man. The first day Harvard won, but Camp insisted that Yale should row the next day, when, thanks to him, defeat gave place to victory. A friend writes of his "singular physical beauty — his handsome face, his manly bearing, and his glorious strength." He continues, "I well remember, while at college, riding out one day with a classmate of his, and passing him as, erect and light of foot, he strode lustily up a long hill, and the enthusiasm with which my comrade pronounced this eulogy, 'There's Henry Camp, a perfect man, who never did anything to hurt his body or his soul!'"[4]

William Holabird, Jr., who became a great golf player at the age of eighteen, was also a man of virility. The *Golfers' Magazine* writes of him, "While chiefly known to the public as a golfer, he was catcher on the school baseball team, half back on the eleven, held the gold medal for the inter-class track meet, and, in fact, excelled in all athletic sports." He was "tall in stature and muscled like a Greek god, with clear-cut, delicate, refined, and manly features."[5]

President Emeritus Eliot of Harvard University has been able to maintain a high standard of health, and, at the age of eighty, is now capable of remarkably efficient work. He writes that, as a boy, his diet was simple and that he had exercise in the open air every day, and two months of out-of-door life in the country or by the sea every summer. His exercise consisted of rowing, fishing, horseback riding, and walking. He was active also in carpentering and wood turning.

While in college he took gymnasium work, boxed, and rowed with the crew. His chief exercise was walking.[6] As the President of a great university and as a citizen, he has shown energy, determination, and courage. He felt it necessary on one occasion publicly to protest against certain acts of labor unionism. This action brought upon him vigorous criticism from labor leaders. His life was threatened. Hundreds of antagonistic men gathered, but he went into the midst of them. His courage aroused their admiration. Instead of expressing their displeasure, they applauded vigorously. Dr. Eliot is wise and fair and has been able to help the cause of union labor. In various capacities he has rendered to the nation services of inestimable value.

Lincoln is one of the greatest examples of virility that our nation has produced. In his youth and early manhood he repeatedly performed various tasks showing fine quality of muscle, wonderful endurance, great energy, high courage, and strong will power. As a youth he wrestled, jumped, ran races, and walked long distances. He could "strike with a maul heavier blows" and "sink an ax deeper into the wood" than anybody else in the community. A friend said of him, "If you heard him fellin' trees in a clearin' you would say that there was three men at work by the way the trees fell." He could out-lift, out-work, and out-wrestle any man with whom he came in contact. On one occasion, he exercised his ingenuity and courage and saved three men who were in danger of drowning. On another occasion, the champion of a neighboring community was matched against him in a wrestling bout. Neither man seemed to be able to throw the other off his feet, and the champion tried to foul. Lincoln no sooner realized the game of his antagonist than, furious

CLIMBING A SNOW-COVERED MOUNTAIN PEAK

Mountain climbing is a most invigorating exercise.

with indignation, he caught him by the throat, and, holding him out at arm's length, shook him as he would a child.[7]

Captain Robert F. Scott, who reached the South Pole January 17, 1912, gave the world a wonderful record of determination, endurance, and courage. Though starting on his expedition with a complete equipment and a large crew of men, as he and his comrades advanced south they were forced to leave behind, not only the less vigorous members of the party, but motor sleds, dogs, and ponies. In making the last 120 miles, he and his four final companions had to haul the great sledge upon which they carried their provisions.

At the pole, they found that Amundsen, the Norwegian explorer, had arrived there only a month earlier. "It is a terrible disappointment," Scott wrote in his record, "and I am very sorry for my loyal companions." But, with magnanimous spirit, they photographed Amundsen's tent with the Norwegian flag at the pole, thus themselves giving to the world a record and a proof of their rival's previous discovery.

On their return they met difficulties and hardships almost unendurable. With over nine hundred miles between themselves and safety they pressed on day after day, week after week, in the face of discouraging accidents, limited rations and fuel, snow blindness, severe cold ranging from 20° to 43° below zero, and piercing, penetrating winds. Captain Scott and his brave companions, with bodies which must have been in wonderfully fit condition, persisted by sheer force of will power, and were overcome by a blizzard only a few miles from their ship.

The simple records, found months later by the side of their dead bodies, tell with dramatic effectiveness of the

last few days of heart-rending torture from exposure and starvation. "Wilson is feeling the cold most, mainly from his self-sacrificing devotion in doctoring Oates' feet," reads the record. "He has rare pluck. He has borne intense suffering for weeks without complaint. . . . We must fight it out to the last biscuit. . . . Oates at last said he couldn't go on. . . . We induced him to come on the afternoon march. In spite of its awful nature for him he struggled on, and we made a few miles." And later when they were in their tent, "He went out into the blizzard and we have not seen him since." When Evans was insensible and the safety of the rest of the party seemed to demand his abandonment, they stood by and did not leave him till two hours after his death. The remaining three pressed on and were later found together, frozen to death in their tent. Scott seems to have survived the longest. He writes in his journal, "We arrived within eleven miles of our old One Ton Camp with fuel for one last meal and food for two days. For four days we have been unable to leave the tent — the gale howling about us. We are weak, writing is difficult, but for my own sake I do not regret this journey, which has shown that Englishmen can endure hardships, help one another, and meet death with as great a fortitude as ever in the past." [8]

Many other examples of men of dynamic power, vision, and leadership might be cited — men who have not only excelled in athletics, but have achieved success in the work of the world, because they have trained and kept themselves fit. Progress towards a higher civilization depends upon men of this type.

CHAPTER II

FIVE ESSENTIALS IN SUCCESSFUL TRAINING

THE youth who would keep himself fit and acquire virility must provide five essentials in successful training. They are (1) wise exercise, (2) fresh air, (3) sufficient rest, (4) wholesome food, and (5) the control of internal force.

Failure to provide any one of these five essentials will endanger the success of the others. Exercise alone will not bring desired results, nor will fresh air alone, nor will any combination of two, three, or four of these elements. All five are necessary. Only when the youth faithfully trains himself along these five lines will he attain his maximum virility.

A complete examination by a physical director is desirable when one begins training. Such an examination should include various tests of muscular strength, measurements of lung capacity, weight, height, and a thorough inspection of heart and lungs. A record of these various results may be kept, together with photographs of the body in two or three different positions. Six months or a year later, by obtaining another examination and another set of photographs, one may note the progress made after following the suggestions given him by the physical director. Thus a plan of competing with one's self may be established. Every month the youth may break his own past records, and at the

end of a year greatly improve his physique and health.[9]

Whether or not an examination be taken, however, it is well for the youth to check over his daily program every month or oftener to see if he has become deficient in any one or more of these essentials. He may find, for instance, that his work and other activities have reduced his time in the open air to only a half hour, and his time of rest to only seven hours. When a youth discovers deficiencies in his daily program or weaknesses in any one of these five essential points, he will set himself immediately to correct his daily schedule and bring it back to normal.

Wise Exercise.— In the physical life of man, activity results in development, and inactivity in stagnation and retrogression. The present-day custom of sitting in the grandstand while two teams of five, nine, or eleven men get all the exercise is an unfortunate and even dangerous tendency. Reading the sporting page, yelling one's self hoarse in the bleachers, and consulting bulletin boards may be enjoyable, but these customs will never produce a nation of vigorous men. Exercise is found, not in the grandstand, but on the field.

The Best Exercises.— Hiking, baseball, rowing, canoeing, and skating in the open air are among the most beneficial exercises. Swimming is an excellent exercise when taken moderately. When swimming in cold fresh water, twenty minutes or less is enough at one time; more than this may be weakening. One may swim for a longer time in salt water. General gymnasium work with dumb-bells, clubs, wands, and apparatus is excellent, as are also boxing and wrestling, when fresh air is provided. Of all these, in the opinion of many, hiking stands first. Hiking takes one out into the open coun-

Copyright, Intercollegiate A. A. A. A., 1911, photograph by Edward R. Bushnell.

FINISH OF A SPRINT

Craig of Michigan is shown as the second figure from the right.

try and into the mountains; it brings into play the large muscles, tones up the nervous system, and generally insures large quantities of exhilarating fresh air, by bringing into use the entire capacity of the lungs.

The youth should not confine himself to hiking, however, or to any particular exercise. Let him guard against specialization and one-sided development. The highest ideal for which all should strive is not to produce a runner or a jumper or a boxer, but the highest type of a physically perfect man.[10] Whatever one's favorite recreation may be, he should add to it a variety of other exercises.

If light exercise be taken, a few minutes of strenuous work should be included to quicken heart and lung action. If, for instance, a boy walks four or five miles a day, it is desirable to run a quarter or a half mile of this distance, or to arrange for the walk to include the climbing of a steep hill. For reasons to appear later, each day's program should include exercise strenuous enough to produce perspiration. An entire change of clothing for all vigorous exercise is desirable. This enables one to put on clean, dry clothes after exercising and bathing.

Excessive Exercising.— For the sake of health the time to stop exercising is when slightly tired, not when exhausted.[11] The sprinter, when training, is careful not to overtax his strength. Only in the race does he feel justified in straining himself to the point of exhaustion. Every physical effort requires energy, and energy is generated by the combustion of fuel or food products. This combustion leaves certain by-products which act as ashes or clinkers and are called fatigue poisons. The system can readily cast off through the lungs, the skin, and the kidneys a normal amount of these poisons; but if physical activity be continued too

long, more poisons are made than can be disposed of by the system. Fatigue and sometimes sickness result.

These cautions refer only to *excessive* participation in the distance runs, boat racing, basket ball, and tennis. For some boys and men who are continually keyed up to a high pitch, and who are of a nervous temperament, hard tennis and basket ball are not desirable. For such persons, quieter exercise may be more profitable.

Posture.— An abundance of proper exercise tends towards the building up of an erect, well-proportioned body. The head, chest, and shoulders should be *held up.* Emphasis need not be placed on throwing the shoulders back. A flabby, clumsy, stooped body and a protruding abdomen detract greatly from the beauty and efficiency of the body. The relative attractiveness of various postures may be observed in the following figure.

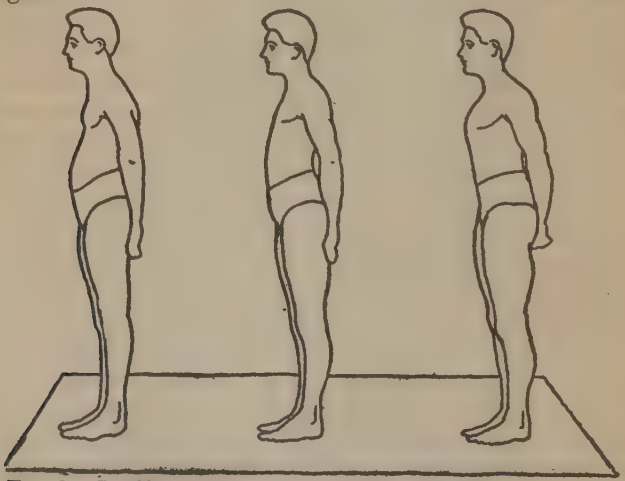

FIG. 1. Profiles showing (from left to right) bad, mediocre, and good postures.

If necessary, one should take special arm, abdominal, and breathing exercises in order to correct faulty tendencies and develop an erect, well-proportioned body.

The Bath.— A man's daily exercise should be vigorous enough to cause him to perspire freely. This helps in throwing off the poisons referred to, a process important to good health. One should follow such exercise with a shower bath of from one to three minutes' duration, using first warm water, then cold, and a vigorous rubdown with a coarse towel afterwards. Warm water and soap should be used first to cleanse the body thoroughly. The feet and hands and hairy portions of the body need particularly to be kept clean. Soap on the head, however, is needed only occasionally in most communities. If a shower be not available, a tub bath may be used with at least two changes of water. The warm bath should not last over five minutes. After this a cold plunge may be taken. If even a tub bath be not accessible, a wash bowl, placed on the floor of one's room, with two or three changes of water, will prove a good substitute. A bath so taken with a good rubdown afterwards may be as invigorating as a bath taken at the finest athletic club in the country.

In order to keep the entire body sweet and clean, many youths find it desirable to take a short vigorous bath every day, especially if a shower be available or if one may be contrived. If a tub be used, one may take a thorough bath, as outlined above, once or twice a week, and a cold splash daily. *The bath should be taken quickly. Prolonged daily baths may be weakening.*

A pleasant reaction should always follow the bath. One should feel as warm after bathing as before. If he does not, water not so cold should be used. A bath should not be taken less than 45 minutes before a meal

and not sooner than 1½ hours after eating, so as not to interfere with digestion.

Dr. Dudley A. Sargent of Harvard University believes that the regular bath following exercise and the habit of bathing established thereby are almost as valuable as the exercise itself.[12]

Rubdowns.— After a track meet or similar occasion demanding unusual muscular exertion, a vigorous massage of the particular muscles fatigued is often advisable. An athlete may massage some of his own muscles. Often he will need the help of his trainer, or coach. A rubdown of this kind assists the system to throw off the fatigue poisons into the blood. It does not take the place of rest, however. After unusual muscular work and the rubdown, a long period of sleep should follow so that the blood may, in turn, cast off the various fatigue poisons through lungs, skin, and kidneys.

Fresh Air.— In the city of Calcutta in 1756, 146 persons were confined in a small apartment, now referred to as the Black Hole, about 20 feet square, having only two small windows. The next morning 123 of them were dead.

At the time of the Civil War, the Assistant Surgeon of the United States Army reported that those whose occupations exposed them to "crowd poisoning or to vitiated air from any cause" were by no means so well fitted for military service as those who were in the habit of living in the fresh air.[13]

Every hour the lungs take in and give out about 800 cubic feet of air. The oxygen of the air is consumed in the process of purifying the blood, the product being carbon dioxide. Therefore when the air is breathed out again into the room, much of its vitality is gone. These

facts emphasize the importance of a continuous supply of fresh air.

Air is the most beneficial gift of nature; it is given freely and unreservedly; it is the one cure-all, more valuable than medicine, more valuable than the skill of physicians; and yet many of us shut it out of our houses.[14] If each deep breath of cool fresh air cost five or ten cents as do cooling drinks, most people would be glad to get several such breaths every day. Some one has said, "He who breathes best, lives best." It is desirable to combine sunshine with fresh air. Sunlight gives tone to the tissues of the body. It also tends to keep the air free from disease germs.

Results with Fresh Air.— What wonderful results may be had from living in the fresh air is shown by experience with open-air schools in Germany, England, and America. Usually children have been selected for the experiments who are below normal in general health — in many cases they have been tuberculous. In the open air, the children respond wonderfully — the color comes into their cheeks and the sparkle into their eyes. They increase in weight and grow stronger physically and more alert mentally.[15]

In Switzerland, tuberculous children are taken up among the snow-covered mountains and are there gradually exposed to the air and sunshine. A good coat of tan soon replaces nearly all their clothing, and although the air is cold, they seem to enjoy their sports in the snow and to derive much benefit from the exercise.[16]

How to Provide Fresh Air.— Those people whose occupations and habits of life keep them out of the fresh air most of the time must definitely plan ways and means of overcoming this difficulty.

The youth should (1) live as much out of doors as

possible, (2) keep the air indoors where he is working or studying as fresh as possible, and (3) sleep in the fresh air.

Two hours a day should be the minimum for actually living in fresh, out-of-door air. More time is of course very desirable. This time should be spent if possible in invigorating exercise, particularly in those exercises which develop the chest, as the heart and lungs need to be given plenty of room. Walking to and from school or place of business is a simple and wise way of providing for a portion of this time.

Cold air indoors is no more harmful than it is out-of-doors. Bad, overheated air is more likely to make us "catch cold" than fresh, cold air. When the outside temperature will permit, it is well to keep open all the doors and windows of the house. Even during the cold season the windows should be partially open; and occasionally during the day all doors and windows should be thrown wide open to insure a thorough change of air.

In recent scientific experiments, human beings have been kept alive in air-tight compartments for many hours by keeping the air in motion and at a moderately low temperature. If one be forced to remain for long periods in rooms where ventilation is difficult, it is highly desirable to have the indoor air kept in motion by an electric fan or other device and kept at a temperature of not over 68° or 70° F.

Arrangements for sleeping in the fresh air may be procured if the youth is resourceful and determined. A room with several windows opened at the top and bottom usually makes a fairly satisfactory arrangement. Tents are good if well ventilated, especially when they can be placed on a flat roof, up above the stratum of bad air which is sometimes found near the ground. The

best arrangement is a sleeping porch, particularly when it is built above the ground floor.

Sufficient Rest.— That rest is needed in proportion to the amount of energy expended is evident. If the youth is to keep in the best possible condition, he must carry out this idea in his everyday life. Nine out of every ten youths between the ages of fifteen and twenty years need eight and one half to nine and one half hours of sleep each night. One may sleep much more restfully by sleeping alone. Double beds are now being largely replaced by single beds for both adults and young people. Though the youth should get all the sleep needed, he should lie in bed no longer than sleep requires. Lying in bed after waking tends to make one lazy and to rob one of vigor. To spring out of bed immediately upon awakening is good for developing the will.

Effects of Insufficient Rest.— As was explained under the heading of exercise, physical and mental activity causes the manufacture of fatigue poisons. Under proper conditions these poisons are cast off during sleep. If, however, sufficient sleep be not provided, they may accumulate and cause sickness.

The problem of fatigue is important in our industrial life. Tables have been compiled from numerous investigations, showing disastrous effects of fatigue among workers.[17]

It is said that Mr. Thomas A. Edison can work all night till six in the morning, then take a little nap from six to nine, and continue with another good day's work. A few men seem capable of working under such conditions, but most people are not Edisons. Because one occasionally hears of a famous man who can work many hours with but little sleep, one is sometimes inclined to think that he himself should work harder and sleep less.

This is a great mistake. A man may get along for a few days or a few weeks without sufficient sleep and notice no particularly bad results, but sooner or later he feels the effects of the accumulation of fatigue poisons. He is perhaps attacked by disease germs during a period of insufficient rest; his system, already behind in its work, is unable to cast off both fatigue poisons and disease germs, and he soon finds himself a victim of disease. Continued study late at night, and attendance at parties, the theater, and other amusements, if participated in at the expense of sleep, are doubly vicious. They increase fatigue and they lessen time for recuperation.

Reserve Strength.— Every youth ought to have not only enough strength for each day's work, but a little extra for use in an emergency — at the finish of a race, for instance, when victory is a matter of a few feet or inches. If an engineer pulls his throttle wide open and uses more steam than the fire under his boiler is generating, he soon lowers the pressure in his boiler. He is then compelled to slow down until the pressure rises, before he can again get the best work out of his engine. The youth, in order to maintain maximum efficiency, to originate great ideas, to execute big pieces of work, must avoid using his strength to the point of fatigue. Each night he must fully recover from the previous day's efforts and in addition store up a little energy for emergencies.[18]

Sufficient Rest Profitable.— Sometimes troubles attributed to other causes may be quickly corrected by getting more rest. The president of a large bank, upon being deprived of a vacation in Europe, decided to get more sleep at home as a substitute. He did so, and found, as he put it, that he could "fight better."

Pressed with the responsibilities of his position, that fighting tone, that ability to say "yes" or "no" decisively and at the right time, must have added not only to his own well-being but to his efficiency as president of the bank.[19]

Wholesome Food.— On Lake Erie in 1900, two large popular steamers raced from Cleveland, Ohio, east 100 miles. Much interest was aroused in advance of the race, and the crew of each boat was eager to win. In preparation for the race, the men on both boats carefully sorted the coal in order to reject material from which a proper amount of energy could not be developed. The race was practically a tie. Had the men on one boat not taken this precaution, their boat would doubtless have been at a marked disadvantage.[20]

The human body may be considered as an engine, and food as fuel. The lungs are machines to bring oxygen to the fuel so that it may burn and produce heat or energy. Clothes keep in the heat and prevent waste of energy. The pores of the skin, the kidneys, the lungs, and the bowels are agencies for removing the clinkers or ashes in the form of waste products.

If it be important for a steamer or locomotive to have carefully selected fuel, certainly the human body is entitled to proper food. This does not mean that men have to know a great deal about food values. The most important things to say to the youth of to-day are (1) beware of fads, (2) eat plenty of wholesome food, (3) chew it to a pulp, and (4) use judgment.

Fads.— The idea of getting much nutriment condensed into a small quantity of food, and numerous other ideas upon which various manufactured products and various "isms" in eating are based, are erroneous. About twenty-five years ago, it was thought by some that

explorers and others who desired might live on food condensed into small volume. This theory has been exploded. Now, it is realized that the stomach and intestines need bulk to work on in order that they may function properly.

What to Eat.— The system, then, needs volume of food as well as nutriment. One should eat chiefly fresh vegetables, cereals, bread and butter, eggs, and fruits, with a little fresh meat or fish not more than once a day. If, perchance, one were forced to eat one food exclusively, bread would be the best food to select. It is the most nearly perfect solid food. Bread and milk together provide all the important elements in food. A variety of foods, however, is desirable.

There has been in the past a difference of opinion regarding the use of meat. Now many authorities agree that eating too much meat may cause constitutional diseases such as kidney disease and hardening of the arteries.

Milk is an ideal drink, and is rich in nutriment. Water is now considered not harmful at meals, if the food be reduced to a pulp, and the water be not used to wash down the food. Water should be drunk freely — it is well to make this a practice — upon rising in the morning and between meals. When one is thirsty, cold, fresh water is the best drink. It is the water in any drink which really quenches thirst.

What Not to Eat.— There are very few foods in common use which one may not eat if one chews them properly. Stimulants and highly seasoned foods, however, should be avoided. Especially should one be careful not to eat meats, fruits, and vegetables which are even slightly decayed. In using canned goods in camp or elsewhere, the can should be emptied and thrown away

as soon as it is opened, in order to avoid metallic poisons. If all of the contents of the can be not needed, they should be transferred to a porcelain or enameled dish and kept covered.

Coffee.— Coffee is a stimulant which increases brain activity. Coffee might therefore be a good thing to use, if it were not for the fact that reaction always follows the use of such a stimulant, and confuses or checks the activity of the brain. Coffee does not add any energy to the system, but tends to give a false sense of power and to cause men to draw on their reserve strength with the result of weakening vitality. It may be said that coffee is to the brain of a youth what a whip is to a fine horse. Once, in the great chariot race, Ben Hur used the whip, and because he had never used it before, it proved effective in the emergency. Even if coffee be used in an emergency, one should expect a period of lessened brain activity afterwards. Tea is also a stimulant. Neither coffee nor tea is a food.

Alcohol and Tobacco.— It is now proved by scientists that alcohol is a poison. Heads of governments, economists, physicians, and business men condemn alcohol because of its effects on health and efficiency. Many statistical tables show these effects.

In respect to tobacco, while many mature men feel justified in smoking, all agree that it is detrimental to the development of a growing youth. Dr. Seaver, formerly director of the Yale University gymnasium, studied scientifically for a period of nine years the effects of smoking among students. He found that non-smokers increased more in height, weight, and chest girth than the smokers; in lung capacity the non-smokers increased 21.60 cubic inches and the smokers 12.17 cubic inches.

Recent scientific investigation also throws light upon the question of smoking. The heart beat of several non-smokers was registered by means of a scientific instrument; also the heart beat of various smokers before smoking, at the time of smoking, and after smoking. The heart beat of the smokers was considerably weaker than that of the non-smokers, it was stimulated at the time of smoking, and became weak again immediately afterwards.[21]

Slow Eating.— Some people eat as though they thought their stomachs had teeth. In eating slowly lies a secret of healthful and happy living. *All food should be chewed to pulp.* If the youth adopts this habit, it will add more to his enjoyment, strength, and efficiency than many other less simple factors in hygienic living.

A little eaten slowly will do more good than much eaten rapidly. Hurry and excitement tend to retard or stop digestion. Dr. Charles W. Eliot attributes much of his success to a calm temperament and a serene mind. These are furthered by taking one's meals leisurely, quietly, and cheerfully. Cheerfulness is a great aid to digestion and good health. A hearty laugh is worth more than all the digestive tablets or chewing gum ever manufactured. Mealtimes should be happy times. To relax fully and rest a few minutes after eating is also good for the digestion.

Judgment.— Men need not only to acquire a knowledge of foods and their use, but they must learn by their own experience to eat properly. There are a number of foods which are good for some people and positive poisons to others. Strawberries, onions, and fish are proper foods for most people, but a few learn by experience that they cannot eat one or more of them. By using judgment, a boy may avoid particular foods which

prove to be harmful to him; and by using judgment he may also restrain himself from overeating. Unless judgment be used, information in regard to food values may do but little good.

DIET

(Containing approximately 2500 calories)

For boys 14 to 18 years of age, weighing 110 to 160 pounds.

Breakfast

Prunes, apricots, apple sauce, or any fresh fruit in season, one dish.

Oatmeal, Rice, or Wheat cereal — Moderate-sized dish, with cream — for winter,

or

Flaked whea or corn, Puffed wheat or rice, Shredded wheat — Large-sized dish, with cream — for summer.[1]

Eggs, two.

(Bacon or griddle cakes may be substituted occasionally, or this course may be omitted entirely.)

Milk, one glass.

Toast, two slices, with butter.

Dinner

Steak, one or two chops, roast, or fish.

Baked potato, one, or its equivalent in mashed or boiled potatoes.

Celery creamed, peas, spinach, cauliflower, beans, carrots or other cooked vegetables, one dish.

Milk, one glass.

1 The breakfast foods suggested for the winter months may be used throughout the year. They furnish more nutriment in proportion to their cost than the prepared foods suggested for summer. If lighter, cooler breakfast foods are desired, however, these prepared foods may be used.

Bread, two slices, with butter.
Any fruit mentioned above, fruit, berry, or custard pie.

SUPPER

Light broth or soup with a few crackers.
Creamed potatoes or baked potato.
Small portion of cold meat, small piece of steak, or one chop if desired.
Milk, one glass.
Bread, two slices, with butter.
Custard, plain pudding, baked apple with cream, or any fruit mentioned above.

In the menu above, which provides changes from day to day, the first-named article in each class of foods is the best of its class. One tires of many foods after continuous use, however; therefore, variety is desirable. One may eat mashed potatoes, boiled potatoes, and creamed potatoes often, but it is well to remember that baked potatoes are the best. So, also, oatmeal is the best cereal. In a similar manner, preference should be given to the first one or two named foods of each class. As a general rule, youths of the broad-chested, broad-waisted, large-boned type should be careful not to overeat. Youths of the slender type should eat more heartily, particularly of vegetables and fruits.

The Control of Internal Force.— The last element of successful training is control of internal force. There is implanted in every youth a certain internal force or instinct. It is the instinct which leads man to perpetuate his species, to reproduce his kind, and we call it the race instinct, the reproductive instinct, or the sex instinct.

Animals have this same instinct. With animals it seems to rule their lives. Nature gives it limitations,

and keeps it under certain control; but animals, themselves, make little or no attempt to control it when it asserts itself at various seasons.

Youth is given this instinct, plus the mental and physical powers through the exercise of which he may develop control of it. Furthermore, he must control it or it will control him. If this instinct masters him, he will lose much of the virility he has already gained; if he masters it, and makes it his servant, then it will bring to his life greater dynamic powers.

In the next chapter it will be shown how this instinct serves the final purpose for which it was intended, how it causes all living creatures to reproduce their kind and thereby continue their species. The sacredness and the importance to the body of the reproductive organs will there be explained.

The male has reproductive organs for two separate and distinct purposes. Their final purpose is reproduction, as stated; their earlier purpose is this — *to develop a boy into a man.*

The Development of The Boy into The Man.— It would be impossible for boys to grow into men were it not for the reproductive organs. This will be shown by three illustrations.

The first is this: On each side of the neck there is a little gland, called the thyroid gland, which continually manufactures an important secretion. It is similar to the secretions of other glands, such as the saliva and the gastric juice. This secretion, however, goes, not into the food, but into the blood, and becomes a very important part of the blood. If by accident this gland be injured in childhood, the child is likely not to grow into a normal boy. He is likely to be feeble-minded, because his development from the time of the accident is se-

verely handicapped by the lack of this important secretion in his blood.

The second illustration is this: When male colts are about a year old, most of them are subjected to an operation called castration. The farmer may say that he "cuts" or "alters" them. This operation consists in cutting away two glands called testicles, which hang in a sack between the hind legs. A colt which is so altered becomes a gelding and a colt which is not cut becomes a stallion. Those who are familiar with horses know what a striking difference there is between the gelding and the stallion. The stallion has more muscle, a longer tail and mane, a higher arched neck, and more fire in his eye. He has more fight in him. He is a far finer specimen of a horse than the mutilated gelding.

The third illustration is this: In some Oriental countries, when slaves are wanted for menial kinds of work in the court of the ruler, young boys are sometimes castrated. These boys do not grow up to be men. It is difficult to describe the kind of human beings into which they do grow. They are likely to lack endurance and energy and courage. In most cases their voices do not change, nor do their beards grow. These unsexed beings are likely to become tricky, effeminate, and cowardly.

From these illustrations a boy may get a good idea of the importance of the reproductive organs in the development of a boy into a man. The facts are as follows: The human male has two glands called testicles which hang in a sack, called the scrotum just beneath the main sex organ, called the penis. They are similar to the testicles of the colt, and somewhat similar to the thyroid glands in the neck. When a boy reaches the threshold of his manhood, these glands increase in size.

They secrete a substance important to his development. At this time, boys undergo various physical changes. The shoulders broaden and the lung capacity increases; the vocal cords lengthen and the voice changes; the hair begins to grow coarser and longer on the face, on the legs, under the arms, and around the sex organs. Sometimes these changes take place at the age of 13, more often at 14 or 15, and sometimes not until the boy is 16 or 17 or even older. Tardy development should not be regretted, for the later these changes take place, the better it is for the boy. One testicle usually hangs somewhat lower than the other as the boy grows older. This is not a wrong condition, as quack doctors would have boys believe.

The substance secreted by the testicles is absorbed by the blood as fast as it is made. The blood takes it to every part of the body from the bottom of the feet to the top of the head, to muscle and to brain, giving tone to the muscle, power to the brain, and strength to the nerve.

A Danger to Avoid.— Sometimes a boy yields to impulses associated with the sex instinct and abuses these organs. This may develop into a habit called masturbation. A boy indulging in this practice runs the risk of missing the virility he might otherwise acquire. If such a boy, realizing his mistake, will stop immediately and absolutely, and live an active, healthy life, Nature will come to his rescue, and assist him in regaining the virility which he may have lost by this practice.[22]

Sexual temptations and excitement may be largely avoided by careful training in respect to food, rest, fresh air, and especially in regard to exercise. If an overabundance of life seems to demand sexual activity, let the youth not yield to temptation, waste his energy, and

lose his self-respect. Far better let him control this impulse or force, and make it his servant. By *immediately* turning to vigorous exercise, or hard mental or physical work, this impulse may be converted in a wonderful yet mysterious manner into a great constructive force in his life. The control of this force seems to contribute definitely to muscular strength, endurance, energy, courage, and will power, and also to intellectual growth and spiritual development. Life for a youth who controls this force will open up far fuller and richer than otherwise would be possible.

Relation of Mind to Virility.— It should be clear that clean living makes for fullness of virility. One should not think for a minute, however, that a youth can keep clean physically without keeping mentally clean. He cannot do it. There is too intimate a relationship between the mind and the body. Sorrow, a mental condition, may cause loss of appetite, a bodily condition. Fear may cause marked disturbances in the digestive tract.

Sometimes embarrassment causes one to blush. As long as the mind dwells upon the subject of the embarrassment, the blood continues to rush to the face. One's will power cannot control the blood supply. The only way to stop blushing is to focus the mind on some other subject.

Experience proves conclusively that a boy or man cannot continue to look upon immorally suggestive pictures, hear so-called "smutty stories," or indulge in sexual thoughts without a harmful physical reaction.

Of course it is impossible to keep dangerous thoughts and suggestions from coming to one's attention. But, by the exercise of will power, a man can avoid harboring them. As the saying is, "We cannot prevent the

birds from flying about over our heads, but we can keep them from coming down and making nests in our hair."

"Entertain in your secret consciousness no thought that you would blush to have your friends know or fear to have your enemies know," a friend writes; and Dr. Prince A. Morrow, a noted physician, has said, "The problem of clean living is primarily a problem of self-control, of the mastery of the mind over the body."

Sometimes one sees a strong, muscular man known to be unclean in his private life. A short-sighted youth may conclude that a man may be unclean and still retain his full strength; but this is not the way unclean living works out in the long run. Aside from a man's responsibility to his future children and to race progress (an important consideration to be discussed later), ultimately the unclean man "loses out." Regardless of how much strength a man has to start with, he is the loser to the extent that he wastes his strength.

It is desirable for the youth who has been curious about these matters to dismiss them now from his mind. He need not worry about glands or anything else concerning his sexual life. If he will live a clean, healthy life, Nature will take excellent care of him.

Patience in Training.— He who would possess virility must work for it. While some men seem to get on well for a few years without particular effort, the man who wins out in the long run is he who not only trains but trains hard and patiently, who develops his body regardless of either advantages or disadvantages at the beginning. Ruskin has said, "If you want knowledge, you must toil for it, if food, you must toil for it"; he might have added, "if virility, you must toil for it"; for, as he says, "Toil is the law."

Summary.— So much in regard to personal hygiene

is being published now in books and magazines that the youth is likely to become confused. He may fail to get his knowledge in its true relation to the subject as a whole. He may also become discouraged, fearing that he must study a great deal about personal hygiene in order to live healthfully. While the study of many such books may be beneficial, it is not necessary. Hygienic living is really a simple matter. It consists largely in living up to a determination to observe the simple, commonplace ideas which have here been enumerated.

The foregoing suggestions in respect to exercise, air, rest, food, and the control of internal force may be reduced to the following five rules:

1. Provide two hours or more of physical activity each day, with short periods of strenuous effort. If possible, all or part of this activity should be out of doors.
2. Sleep in the fresh air, and sleep long enough each night to fully recover from the previous day's exertions. (This will generally mean 8½ to 9½ hours.) Also, keep the air indoors fresh.
3. Bathe often enough to keep the body sweet and clean. (This will mean a daily bath for many.)
4. Eat fresh foods moderately, and meat sparingly, and chew all foods to a pulp; drink milk instead of coffee or tea, and use judgment.
5. Control body and mind. Make sex instinct a strength-producing force.

These, then, are the standards for the youth who would keep himself fit. Let him measure himself by these rules regularly, every month or oftener. When

weaknesses are discovered, let him promptly correct them, and thus by faithful effort achieve good health. He will know the joy of breathing the fresh morning air, of the splash of cold water on the body, of the taste of simple foods. A high degree of virility will mean for him the joy of action and conscious strength.

CHAPTER III

DANGERS TO VIRILITY

In the United States there are probably at all times about 3,000,000 persons seriously ill.[23] A large proportion of these are sick because, as individuals, they do not take good care of themselves; and another large proportion, because society as a whole has not yet acquired control of infectious disease. This condition of affairs constitutes a great economic waste, which is, in large measure, unnecessary.

Disease is a danger to virility which the youth may for the most part avoid. The science of sanitation is rapidly safeguarding the public against infections by such measures as vaccination and the use of antitoxins and the insistence upon pure water and milk supplies. But the best safeguard against disease for the youth is training. By keeping the body in the best possible condition, one maintains a high state of resistance, so that when disease germs of any kind attack the body, they may be destroyed before damage is done.

The dangers against which even the youth should protect himself are tuberculosis, colds, typhoid fever, constipation, venereal disease, worry, drugs, and disorders of the eye, nose, throat, and teeth.

Tuberculosis.— Of the infectious diseases, tuberculosis is one of the most serious. It is the great white plague. It kills hundreds of thousands, and causes an annual expense in the United States of about one bil-

lion dollars. Today people are learning to prevent and cure it by the simplest means imaginable — living in the fresh air. Although diet and sleep are important, the one great preventive and curative factor is fresh air.

The youth who has any tendencies towards tuberculosis should consider outdoor living more important than school life or any other occupation. If his physician advises life in the open for a year or two, he should quickly put aside other ambitions and adopt that mode of life which means recovery and health.

Colds.— Colds cause a great loss of virility, especially to persons who have them often. A cold is a serious germ disease, the medical name of which is *coryza.* It may be said that thousands of people die of colds — not directly, but indirectly. It is a disease not entirely of the throat or nose, but of the entire system. The coryza germ, by getting through the system, breaks down the resistance, so that other more dangerous germs may enter and cause serious damage. Among these is the pneumonia germ. Most cases of pneumonia start with a "common cold." The coryza germ has been called the "little bad boy of the gang who, having once broken into the system, turns around and calls back to the bigger boys, 'Come on in, fellers. The door's open!'" [24]

General training, with emphasis upon fresh air and sufficient rest, will do much in preventing colds. The fact that those who live in the open are the most free from colds should convince us that it is lack of fresh air indoors, rather than too much, which causes us to have colds. The teamster, the chauffeur, the forest ranger, and the mail carrier seldom suffer. The motorman on our street cars suffers more frequently now than when he stood in the open. The locomotive engi-

neer is sometimes exposed to extreme cold on one side and severe heat on the other side, yet seldom takes cold. Notwithstanding the severe exposure to which explorers are often subjected, colds are unknown in the polar regions.[25]

If a cold be contracted, a good treatment consists in drinking three or four glasses of hot lemonade and taking a cathartic upon retiring. The hot lemonade causes profuse sweating and urination, resulting in the casting off of poisons by both kidneys and skin. One should preferably stay in bed the next day. This treatment is better than to let a cold continue and cause one to feel half sick for several days.[26]

As a matter of practice, however, it is much better to consult a physician when one feels sick than to use home remedies. If a man treats himself, a serious disease may develop unnoticed, which might be detected early by a physician. One is safer, even with a light cold, if he be under the supervision of the family physician.

Typhoid Fever.— The number who died of typhoid fever in the United States during 1912 probably exceeded the number killed in six of the greatest battles of the Civil War.[27] People are now learning, however, that this disease can be prevented by drinking only pure water and pure milk. Flies may carry typhoid and other germs and therefore should be destroyed. Garbage should be kept in closed cans, manure should be covered, and the breeding of these pests in other places should be prevented by similar means. It is now hoped that flies may soon be permanently destroyed.

If a youth, then, finds himself in a community with a dangerous water or milk supply, he will want to use every means in his power, for the sake of his own health and that of his family and friends, to correct this con-

dition. Though boiling the water and avoiding milk will prevent infection, more permanent measures should be taken. If health officials and other municipal authorities are enlightened and have the welfare of the community at heart, they will take steps at once to remedy conditions if the danger be properly brought to their attention.

Constipation.— Habitual constipation is a common trouble and causes a great loss of vigor. When waste food products accumulate and are not promptly cast off, the system absorbs poison from them. Headache and other symptoms of general ill health may result. It is important — in fact of first importance — for the youth to have at least one regular time each day for eliminating these waste products. The movement of the bowel should be accomplished without laborious straining. This may cause piles, an exceedingly painful disease of the rectum. General training greatly aids regularity.

If special remedies are necessary, more fruit and more butter may be added to the daily menu. Unripe fruits should be avoided. Two glasses of water upon arising, followed by a brisk walk of 15 to 30 minutes or abdominal exercises before breakfast, are particularly helpful, as are also two or more glasses of water drunk between meals. Abdominal exercises which are especially helpful are those described by Figures 3, 6, 7, 9, and 10 of the Home Exercises described on the following pages. Except in emergencies, or upon the advice of a physician, medicines and injections of water into the lower bowel should not be used for this condition.

Venereal Diseases.— Venereal diseases are germ diseases which start with an infection of the sex organs. From the sex organs, the germs often travel to other parts of the body. Of all diseases, venereal diseases are

HOME EXERCISES

These exercises should be taken daily, either in the morning before dressing or at night just before retiring. They should be performed vigorously for five to fifteen minutes, and, preferably, they should be followed by a bath and a brisk rubdown.

Exercise 1

Position: Arms extended to side horizontal.

Movement: Swing forward and return.

(Emphasis upon backward movement.)

Exercise 2

Position: Stand with hands on side of chest.

Movement: Thrust arms to front horizontal, extending fingers and bending knees a little. Do it rapidly.

Exercise 3

Position: Stride stand, hands on hips.

Movement: Rotate body at waist.

Exercise 4

Position: Arms at side, horizontal, back slightly arched.

Movement: Circle arms backward.

Exercise 5

Position: Stand with head pressed against a pad or pillow placed against the wall.

Movement: Perform up and down and sideward movements of the head.

Exercise 6

Position: Stride stand, arms at side horizontal.

Movement: Rotate and bend touching floor with hand on opposite side.

Exercise 7

Position: Stand with arms at vertical.

Movement: Full knee bend and reach forward as far as possible.

Exercise 8

Position: Stand facing wall.

Movement: Drop forward to bent arm leaning stand, and return to stand. Gradually increase distance.

Adapted from Exercises prepared by the Health League of the Young Men's Christian Association and A. B. Wegener.

Exercise 9

Position: Lie on back with toes under some object to hold them down.

Movement: Raise body to sitting position.

Exercise 10

Position: Lie on back.

Movement: Raise knees to chest slowly.

Exercise 11

Position: Front leaning rest.

Movement: Flex arms repeatedly.

Exercise 12

Position: Stride stand with arms fixed.

Movement: Twist body and strike alternately left and right.

now considered the most serious. They constitute the great black plague (called on the Pacific Coast the great red plague). There are two principal venereal diseases. They are contracted almost always from prostitutes. A prostitute is a woman who makes a business of selling her body to men. Most prostitutes are diseased part of the time and some of them most of the time. There are also non-professional prostitutes — women who prostitute themselves only occasionaly to particular men. From a standpoint of disease, non-professional prostitutes as a class are as dangerous as professional prostitutes, or even more dangerous. In referring to the infectiousness of both these diseases, it should be stated that certain preventives recommended by unscrupulous men are not to be depended upon.

Syphilis is one of the venereal diseases. Men are generally afraid of this disease. When the germ of syphilis gets into the blood, it may cause loathsome sores on various parts of the body. It is well understood to cause much insanity and paralysis. A man may transmit syphilis to his children, who may have to suffer much more than he himself suffers. His children's children, even, may have to pay the penalty of his mistakes.

Gonorrhea (or clap) is not well understood by many men. It has often been said that gonorrhea is no worse than a cold. That is a false statement which has caused immeasurable suffering. The germs of gonorrhea are sometimes exceedingly persistent and treacherous. They may remain asleep inside of the body for months and then break out and cause a recurrence of the disease. It is true that many men are apparently cured of gonorrhea in a few weeks' time. Quack doctors and other incompetent physicians often stop outward signs

of the disease and leave the germs deep seated in the tissue, to break out again, possibly years later. Gonorrhea cures sold in some drug stores are worse than useless. A man may contract this disease, realize his mistake, may quit associating with immoral women altogether; he may fall in love with a beautiful girl whom he would not harm for anything in the world and his happiness may seem complete. And then, after marriage, tragedy may come. He may find that he has made his bride an invalid for life.

It is said by physicians that this disease causes about 50 per cent of the operations upon women for diseases of the reproductive organs; it also causes large numbers of women to be incapable of bearing children, and many to be invalids or semi-invalids for life. Furthermore, it is estimated that there are to-day from 10,000 to 15,000 blind people in the United States who became blind at the time of birth because of gonorrhea.[28] Their blindness is incurable. A large proportion of all this suffering is caused by gonorrhea given to the wife *by men who think they are cured before marriage.* It should be understood, however, that there are other causes of blindness, childless marriages, and invalidism. Therefore, one should refrain from drawing conclusions regarding disease in others.

Venereal diseases may be acquired by accident, from public drinking cups and from toilet seats. Therefore it is well not to use public drinking cups, and well to protect the sex organs from contact with public toilet seats. These diseases are very rarely caught in this way, however. Practically always they are contracted from persons having one or the other disease.

Many darker pictures might here be drawn to show the effects of these diseases upon the innocent; most

physicians can tell of tragedy after tragedy due to venereal diseases. But these are not pleasant to relate, and it seems unnecessary to enlarge upon the subject here.

Worry.— Another danger to physical strength and vigorous life is worry. All worry is needless, useless, and harmful. It robs one of energy and vigor. Most boys are not so foolish as to worry, except when they do not understand an experience which comes into their lives at about the age of 16 to 19. It is a physiological experience which every youth should understand.

Emissions.— Inside the body near the bladder are two little glands, which may be likened to miniature football bladders. When a boy is blowing up a football bladder and he lets his finger slip from the rubber tubing, the inward pressure of the walls of the bladder forces out all the air at once. These little glands, called seminal vesicles, act in a similar manner. They begin at about the age of 15 to 18 to fill up with a secretion. They get fuller and fuller until finally they can hold no more. Then in the night, during sleep, when the youth has no control over his body, the walls press inward and force out a small quantity of this secretion through the same passage through which the water from the bladder is discharged. This is sometimes called a wet dream. It is more properly called a seminal emission. It is a natural experience and happens sooner or later in the lives of all healthy boys. In some boys these experiences may begin at 15 or even earlier, in other boys they may begin as late as 18 or 19, or even later. At first they may occur only once every few months. When full manhood is reached at the age of 21 to 25, emissions may still happen infrequently or they may occur as often as two or three times a month or even oftener. They are also likely to be irregular. Two or possibly three

A Refreshing Form of Exercise

Swimming brings into play all the large muscles of the body.

may occur on successive nights, and then there may be none for a period of several weeks.

The secretion of the testicles, which hang on the outside of the body, bears a vital relation to virility, because this secretion is absorbed by the blood. The secretion of the seminal vesicles within the body, however, is not needed in the development of virility, and it is this secretion that is occasionally discharged.[29]

Cautions.— If a boy or young man allows himself to become sexually excited, these emissions may involve the whole sexual system, and may happen so often as to be harmful. A short time ago, a football player on one of the big University teams began to play poorly. His coach investigated the trouble and found that the man had a suggestive picture hanging in his bedroom. The coach at once tore it down.[30] Pictures of this kind, suggestive stories, certain vaudeville acts, and all impure thinking may result in emissions at too frequent intervals. If one be leading a comparatively inactive life physically, and fears he is having emissions too often, he may do well to add more physical exercise or manual labor to his daily program. If the emissions do not become less frequent, it may be assumed that they are occurring at natural intervals, provided, of course, they are not caused by sexual excitement during one's waking hours.

It is well not to lie on the back at night or to drink water late in the evening. If one sleeps in this manner, the bladder may rest in a full condition on top of these little glands, irritate them, and thus cause an unnatural emission.

Local Irritation.— Occasionally, when the foreskin of the sex organ is long, a cheesy substance, which collects under the foreskin, causes irritation, resulting in emis-

sions at too frequent intervals. This irritation may be prevented by drawing back the foreskin when bathing, and washing the organ clean. If the condition of the organ is such as to make this impossible, a trivial surgical operation called circumcision may be performed, if this be advised by the family physician.

If the sex organ becomes hard and erect at times, the youth need not worry. The wise way is to pay no attention to it.

Varicocele.— Another needless source of worry is a condition called varicocele. Sometimes the veins around the cord in the scrotum (the bag-shaped receptacle in which the testicles hang) become enlarged. This is all there is to varicocele. It is seldom dangerous, though quack medical concerns call it so in their advertisements. Often nothing needs to be done; rarely it is necessary to wear a suspensory; occasionally a slight operation is advisable. If advice be desired, one's family physician or some other first-class doctor should be consulted. If the condition causes no trouble, no attention need be paid to it.

Quack Doctors.— Boys and young men should not allow the advertisements of quack doctors to frighten them. These men are scoundrels who try to frighten the ignorant into paying large sums of money for troubles which do not exist, by referring in their advertisements to "lost manhood," pimples on the face, and other things which have nothing to do with sexual health. Thousands of dollars have been wasted on these quacks and hundreds of boys have passed through periods of great worry, fearing they were diseased because of false ideas and misinformation. Fortunately, Social Hygiene Societies, State Medical Boards, the United

States Government, and other agencies are putting these scoundrels out of business.

Pimples.— Many boys pass through a period in their lives in which they are annoyed by pimples on the face and other parts of the body. Pimples have little or nothing to do with the sex life and are not in any way an indication of venereal disease.

Fear and worry tend to make us cowards and to rob us of vigor. The healthy youth, as a rule, need pay no attention to seminal emissions or to his sex organs in any way. If he will keep clean in mind and body and take good care of his general health, there will be no cause for fear and worry.

Drugs.— Headaches and other pains are danger signals and should be so regarded. The real cause of trouble should be studied instead of covered up by the use of headache medicines and other drugs. Some drugs not only are ineffective in getting at the real trouble, but they cause positive injury to the system. Various popular headache powders, which contain coal-tar products, are weakening to the heart; death even has resulted from their use. Two or three widely advertised soda-fountain drinks also contain injurious drugs. Most patent medicines are to some extent frauds. Many times they contain habit-forming drugs and other injurious substances. A wise youth will consult a reliable physician when in ill-health, and not rely on any of the much advertised patent medicines.

Throat, Eye, and Teeth Disorders.— Facial deformities, deafness, retarded intellectual development, serious nervous disorders, stomach disease, and juvenile delinquency are some of the direct and indirect results of common defects of throat, eye, and teeth.

Adenoids are found in the back of the throat. By causing one to breathe through the mouth, they often result in the "hatchet face" and various disorders. Deafness and backwardness in school are also traceable to adenoids.

Sore throats are sometimes not serious, but so often do they prove to be an indication of diphtheria, scarlet fever, whooping cough, measles, or tonsilitis, that today every sore throat is regarded with suspicion by those well posted in preventive medicine.

Eyestrain may cause indigestion and other serious troubles. Few things will cause a breakdown of the nervous system more swiftly and surely. It is found that many juvenile delinquents have defects of vision. The use of newspapers and books with small type, reading on street cars, excessive use of the eyes at night, attending moving picture theaters too frequently and sitting too close to the curtain are among the most common causes of eyestrain. If we force our eyes to overwork in studying, we may develop eye or nervous trouble, and lose far more time as a result than we could ever gain by extra work.

The care of the teeth is more important than many suppose. Indigestion, dyspepsia, foul-smelling breath, aches and pains in later years are penalties paid by many men who neglect their teeth in early life. Unclean teeth detract greatly from the general appearance. The youth ambitious to have a clean body will brush his teeth often (at least each night and morning) in order to keep them clean, white, and attractive. It is well to have the teeth examined carefully at least twice a year. Decay of the teeth may thus be stopped in its early stages, and time, suffering, and money saved.

It is of even greater importance to have the throat

and eyes examined if there be any suspicion of weakness or disorder. The youth should beware of danger signals. For the eyes an oculist (a physician who specializes in eye work) is probably safer than an optician.

A consideration of these dangers to virility should not cause the youth to fear he will contract disease. It is well, when beginning active physical exercise of any kind, to have not only an inspection of heart and lungs, but a complete medical examination, to see if there be any weaknesses which need particular attention. If such an examination shows the youth to be in good health, he need have no fears. The thought to be remembered from this chapter is that disease is almost always unnecessary. Knowledge of disease shows the importance of healthful living. If the youth will train and keep himself fit, he can develop a high degree of bodily resistance, and he need have but very few, if any, sick days in his life.

CHAPTER IV

TRAINING AND RACE PROGRESS

TRAINING is important not only to the individual youth, but to the future generations which will succeed him. Every youth alive to-day may affect the future of hundreds of descendants. Those who follow him may be vigorous and useful citizens or they may be defectives and a source of great expense to the state. According to the training and the standards of living a youth adopts in early life, he may be a factor in race progress or a factor in race degeneration.

In 1720 there was born in New York State a man to whom scientists have given the name of Jukes.[31] He had five daughters, and there has been up to the present time a total of at least 1000 descendants. The histories of these descendants, together with about 200 persons who have married into the family, have been looked up. They have included:

Professional paupers	310
Convicted criminals	130
Habitual thieves	60
Murderers	7
Victims of venereal diseases	440
Prostitutes	at least 600
Tradesmen	20

(Of the 20, 10 learned their trades in prison.)

Scientists who have traced the record of this family

estimate that up to the present time it has cost the state of New York over $1,000,000.

In 1703 there was born a boy named Jonathan Edwards.[32] He became a very able man. A few years ago, 1394 of his descendants had been listed. These have included:

College presidents	13
Judges	30
Public officers (including one vice president of the United States and three United States senators)	83
Eminent authors	60
Physicians and surgeons	60
Clergymen, missionaries, etc.	100
College professors	65
Officers of Army and Navy	75
Lawyers	at least 100
Managers of railroads, banks, etc.	15

The striking contrast between these two families emphasizes the importance of learning the facts about heredity. It is profitable, therefore, to study how life is passed on from one generation to another, how various forms of life reproduce themselves.

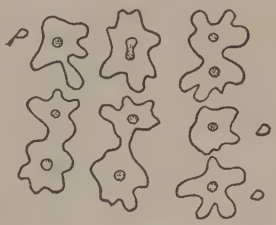

FIG. 2. Diagram showing cell division in the amœba (highly magnified). *P*, parent cell. *D*, daughter cells.

The Reproduction of Life.— One of the simplest forms of life known is the single cell called the amœba (see Figure 2). This little animal, or organism, reproduces itself by a process called cell division. After the amœba has grown to its full size

it gradually gets longer, and thinner in the center. The nucleus in the center divides and the cell comes to have two distinct parts, each with a nucleus. Finally the two parts completely separate, resulting in two daughter amœbas, just like the parent except for the fact that they are smaller. The parent amœba has reproduced itself. In this case the parent has given all of its life to its offspring. Nothing remains. Its sacrifice is said to be complete.

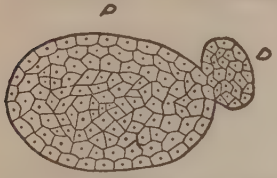

FIG. 3. Diagram showing reproduction in many-celled organism (highly magnified).
P, parent organism.
D, daughter organism.

Figure 3 represents a many-celled organism.[33] This little animal reproduces itself by a process of cell division, but in this case it sacrifices only part of itself. The parent organism remains and can later reproduce itself again. The daughter organism becomes entirely separated from the parent and soon becomes a parent itself, capable of reproduction.

In the more complex many-celled organisms, including human beings, there are many millions of cells. As scientists study complex organisms, it becomes necessary for them to classify cells according to their uses. Among the many different kinds of cells, there are thousands known as muscle cells, thousands as brain cells, thousands as gland cells, and thousands as germ cells or reproductive cells.

Figure 4 may be used to represent reproduction in certain forms of animal life (for example, the salmon).[33] The male (M) and also the female (F) are composed of millions of cells (many more, of course, than are shown in the figure). Each has muscle cells, brain

cells, and germ cells. The difference is that the germ cells in the female and the male are different. The female germ cell (O), called the ovum, is round in shape and passive in disposition; the male germ cell (S), called the sperm, is shaped generally like an elongated tadpole and is active in disposition. Both the ova and the sperms are liberated from the female and male or-

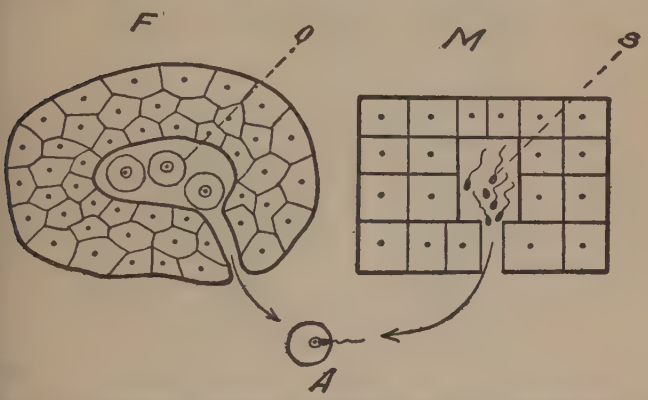

FIG. 4. Diagram (greatly idealized) showing fertilization of the ovum outside of the female organism (highly magnified).
M, male organism; *F*, female organism; *O*, ova; *S*, sperms; *A*, sperm fertilizing an ovum.

ganisms before reproduction occurs. The sperms are attracted to the ova, and unite with them. The sperm is said to fertilize the ovum. This makes it capable of growth. After the ovum is fertilized it grows through a process of cell multiplication, and becomes an adult organism, sometimes a male and sometimes a female.

In other instances (for examples, the human organism and all mammals), the ovum is not at once liberated.

The sperm is released from the male organism, however. Sperms are developed in the testicles of the male. They are live organisms capable of motion, and under a high-power microscope they may be seen propelling themselves. The sperm cells of various animals are shown in Figure 5. When reproduction occurs among mam-

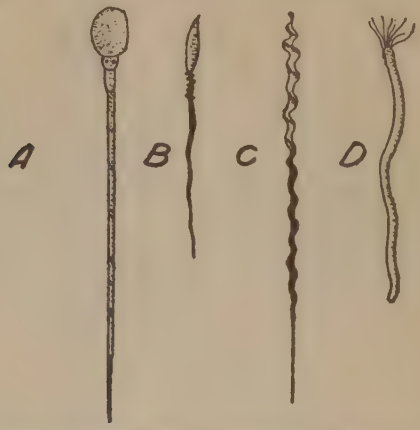

FIG. 5. Sperm cells (highly magnified on different scales). *A*, human; *B*, bird; *C*, bird; *D*, snail.

mals, a sperm cell which has been released from the male organism enters the female organism and fertilizes the ovum within. This is illustrated by Figure 6.[33] After the sperm unites with the ovum, the ovum thus fertilized develops to a certain state, when it frees itself from the parent and continues its growth in the outside world. It, in turn, becomes an adult organism, male or female, as the case may be.

While in the more complex forms of life the male and female parents sacrifice but little of their own lives

in liberating germ cells from their bodies, the nourishment and care which they give to their offspring involve far more sacrifice than is ever required of the simpler organisms. Sometimes the female (as among the birds) must deposit a large amount of food within a shell, so that the ovum, shut up within, can grow and achieve sufficient strength to break loose from its covering and obtain food for itself. In other instances (as in human beings) the female must carry the growing ovum

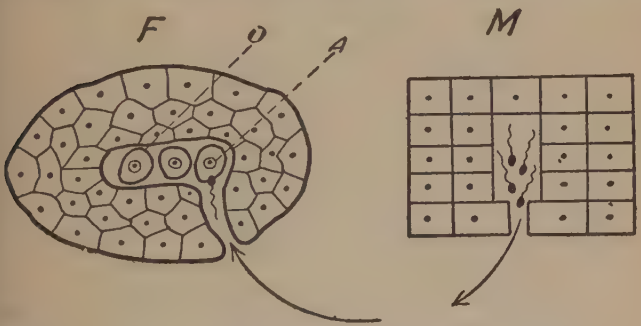

FIG. 6. Diagram (greatly idealized) showing fertilization of the ovum within the female organism (highly magnified). *M*, male organism; *F*, female organism; *O*, ova; *S*, sperms; *A*, sperm fertilizing an ovum.

within its own body, protect it, and nourish it for a period ranging from a few weeks to many months. As will be seen later, the human father and mother sacrifice more for their offspring than do all other forms of life.

It will now be interesting and profitable to see how these laws apply to particular forms of life with which we are familiar.

Reproduction in Plant Life.— The most beautiful part of the plant, the flower, contains the reproductive

organs of the plant. The male germ cells develop from the yellow pollen, which is readily noticed in most flowers. The female germ cells, or the ova, are found at the base of the central organ, the pistil, in a receptacle called the ovary. When the flower is in full bloom, it is ready to do its part in reproducing the plant. Flowers have no control over the process of reproduction, but are entirely dependent upon other forces,—especially upon the wind and upon the work of insects.

The lily furnishes a good illustration of reproduction in plant life. Reproduction in this plant may be brought to pass by the industry of the bee. All the lily blossoms have a number of short stems, called stamens, in the swollen ends of which the pollen grows (see Figure 7). As the bee works from one flower to another, accidentally, as far as it is concerned, it gets pollen on its body. When it flies to another flower, the pollen brushes off on to the sticky end of the pistil. From the pollen grains, little germ cells move down through the pistil into the ovary, where they fertilize the ova. The ova thus fertilized become growing seeds. Then as the summer advances, the petals of the flower droop and fall, the ovary becomes a seed pod, the seeds grow larger

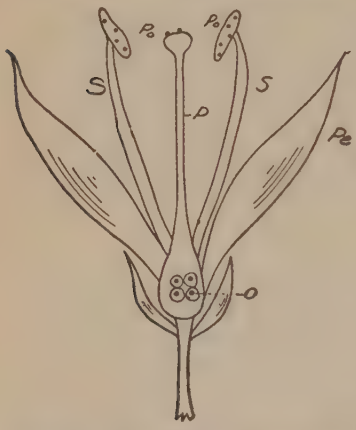

FIG. 7. Diagram showing cross section of lily.

O, ova; *Po*, pollen grains; *S*, stamens; *P*, pistil; *Pe*, petals.

and larger, and soon are ready to be gathered. If planted the following spring, they will produce plants which will bear flowers like the one from which they came. If one is able to study all of this with the use of a microscope in a laboratory, one gets a much better idea of the beauty and wonder of the whole process. All flowering plants are dependent upon insects, the wind, and other natural agencies for their reproduction. No plant can choose whether or not it will reproduce itself.[34]

Reproduction in Animal Life.— Salmon furnish interesting examples of reproduction in animal life. They are found along both the eastern and western coasts of the United States, but are the most plentiful in the fresh-water streams flowing into the Pacific Ocean. The salmon born in these rivers start downstream for the sea as soon as they are about an inch and a half in length. There they grow and develop for a period of from two to four years. When they are fully matured and when springtime comes, they swim back into the fresh-water streams, and often through rapids and up over falls. They go on and on till they finally reach shallow water, where the female digs a nest in the sand and lays a quantity of ova from her body. The male then swims over the nest and pours from his body a few drops of fluid containing sperms. These sperms fertilize the ova. The male and female work, first one and then the other, for about two weeks, until the average female has laid about 6000 eggs.

All this time they have been so intent on their work that they have eaten nothing — in fact they have hardly stopped to eat all the way up from the ocean, so that now they are much exhausted from lack of food and from the process of reproduction. They drift down-

stream, but none ever reach the ocean alive. They give up their lives for their young. *They sacrifice life itself in obeying the race instinct and in fulfilling the laws of reproduction.* In the meantime, a small per cent of the eggs which have been fertilized hatch out young fish, which in their turn, if they are not eaten by larger fish, swim to the ocean, where they develop into fine, big salmon.

It was seen that flowering plants are dependent upon bees, the wind, and other outside forces for their perpetuation. Animals reproduce their kind through the working out of the race instinct within them, and are not dependent upon other agencies.[34]

Reproduction in Human Life.— Human reproduction is on a much higher plane. In some respects, however, the process is similar to that in the flower. Within the body of the human mother there are two ovaries which produce ova at intervals of about twenty-eight days. When a sperm from the male sex organs unites with an ovum within the body of the mother, the ovum thus fertilized begins at once to develop. This is the beginning of a new individual life. It continues to grow month after month, carefully protected by the mother and nourished by the blood from her heart, until, after nine months, it is born a new human life into the world. This means suffering and sacrifice on the part of the mother; but she thinks of it rather as a privilege than as a sacrifice. So intensely does she love the new life she has had a part in creating, she is willing and glad to undergo suffering for it. After birth, the mother feeds the child with her own milk, clothes and shelters it, nurses it when sick, and in a multitude of ways gives of her strength and of her very life, because of her great love for it.

In a true man, the beauty and wonder of it all awakens tenderness and a protective sense toward all women and girls. Not only is he inspired by the sacredness of motherhood, but also by the solemnity of fatherhood. The power to be a parent in the creation of life brings to men a wonderful and sacred responsibility.

While reproduction in most plant life is dependent upon outside agencies and while animals reproduce almost entirely under the control of the reproductive instinct, when the plane of human life is reached, it is found not only that man has been endowed with this race instinct, but that he has acquired the power to control it to a far greater extent than have the animals. In this respect he is far above them.[34]

The Transmission of Characteristics.— It has been shown how we transmit life from one generation to another. Now it is important to inquire what characteristics, such as genius, perseverance, disease, and insanity, may be transmitted to future generations. The laws of heredity have not yet been fully determined by scientists, but a few facts are known which are important for us to understand.

Characteristics Already in The Family.— Evidence is accumulating to show that such characteristics as feeblemindedness, insanity, and criminal tendencies, on the one hand, and resistance to disease, inventive genius, musical ability, and strong moral qualities, on the other hand, are all transmitted to future generations when these characteristics are represented in the germ cell. It should be understood, however, that, according to the best scientific facts at our command, acquired characteristics are not transmitted to any measurable extent. If there be inventive ability in a boy's family, he may transmit this ability to his children. But if there be

no ability of this kind in him or among his ancestors, he cannot alter the germ cell and introduce inventive ability into the family even by hard study.[35] Sometimes, however, inventive ability is concealed in the family stock for several generations, so a youth may become an inventor even if his father and grandfathers have shown no such ability.

An appreciation of the fact that both desirable and undesirable characteristics are transmitted to future generations should make both young men and young women careful about marriage. It involves a serious risk socially for those belonging to families having tendencies towards feeble-mindedness, idiocy, or insanity, to marry, because they may bring, and often do bring, into the world children with these characteristics. It is socially advantageous for men and women gifted with desirable characteristics to marry and to reproduce children which will be similarly gifted.

Possibilities of Damaging the Family Stock.— Now it is important to consider if it be possible so to change the germ cell as to damage the family stock. There is some evidence to show that the use of alcohol by the parent may affect the germ cell and thereby injure the offspring.[36] Observations tend to show that syphilis may change the germ cell and thus damage the family stock. One physician examined 90 syphilitic families. He found that 8 of these families produced no children. Among the remaining 82 families, reproduction started in 350 instances. The results were as follows: 91 were prematurely born in an imperfect condition, 10 were born dead, 66 died very young, and 183 lived. Of these that lived, it was found that at least 83 were diseased.[37] Investigations have convinced many scientists that syphilis can and sometimes does damage the

germ cell. Whether this will be proved later or not, it is unquestionably true that a large proportion of children of parents who have syphilis become imbecile or insane. In this connection it should also be remembered that many children become blind immediately after birth, because of gonorrhea.

The Transmission of Standards of Living.— A youth, when he marries, may pass on to the next generation not only the desirable and the undesirable characteristics mentioned, but also certain customs and standards of living. If a youth establishes habits of eating properly, of getting sufficient rest, and of exercising freely in the fresh air, in all probability when he marries these customs will be continued, and his children will enjoy similar advantages and become healthy men and women. A youth who keeps in training, who establishes a healthful home, and who has strong, vigorous children, becomes an effective factor in the progress of the race.

The Control of the Sex Instinct.— The sex instinct may be a great blessing or a source of destruction — depending upon man's control of it. If it be not understood and if it be not controlled, diseases may be contracted which sometimes handicap one or more succeeding generations.

The nature of the sex instinct may be understood by referring to various natural phenomena. Fire is a great blessing to mankind. It warms our houses and cooks our food. Up in the mountains, after a day's hard climb on the trail, its warmth cheers the campers, it cooks their suppers and keeps them comfortable through the chilly evening hours. It may be a great comfort to them while it is under control; but if it gets beyond their control, it may cause ruin — the loss of thousands

of dollars' worth of timber, or the loss of the lives of fire fighters.

So, also, a spirited horse is a great prize. It is a joy for a man to ride him, and feel his fine strength and vigor under his control as he guides him this way and that, and commands him to run or to walk. But beyond his control, the horse may kill him.

It is a fine thing to have temper, to be capable of becoming angry. It adds a certain desirable quality to the courage and will power of a man. But a man must control his temper, or it may some day control him; and under its control he may commit an act he will forever after regret.

At many points in the Rocky and Cascade Mountains, engineers have found mountain streams fed by the melting snows, rushing uncontrolled to the rivers and thence to the sea. By building great concrete dams at advantageous points, their flow has been checked, and great quantities of water stored up above these dams. It is directed into conduits, which take it into turbines, where it generates electric power for lighting homes and business houses, for running street cars, and driving great dynamos in factories. If it be simply checked, the accumulation may cause damage. In order to utilize the power, the engineers must not only hold back the water but they must direct it through the conduits to the turbines.

As in the realm of natural phenomena control means the development of power, so in human life, the control of the sex instinct enables youths to develop greater virility than would be possible without control. But as the dammed-up water must be directed, as the spirited horse must be guided, and as temper must be given an outlet along safe lines, so it is not enough to repress the

sex instinct; it, too, must be directed into constructive activities. The idle youth is on dangerous ground. As Charles Wagner reminds us, "Work is life, idleness is death."

Let the youth throw his energies, his enthusiasm, the whole flow of his life into athletics, art, music, religion, into club activity, into his studies, into the vocation of his choosing, into any activity which is constructive, and *he thereby utilizes a great force which, as an immature boy, had not been at his command.* Thus life for the youth may be made richer and fuller, and thus he may gain a capacity for enjoying the great and beautiful things of life, hitherto impossible.

The Fight for Control.— As a boy develops and acquires manhood, sometimes the race instinct asserts itself so strongly that he is tempted to gratify it by association with immoral girls or women who may or may not be professional prostitutes.

He who yields to this instinct debases love, the finest, highest, and greatest thing in all life, and sinks to the level of the beasts. Love in youth may be confused with lust. Each has its root in the sex or race instinct. The one is noble and divine, the other is beastlike. David Starr Jordan says, "Just as honest love is the most powerful influence for good that can enter into a man's life, so is love's counterfeit (lust) the most disintegrating.— Love's arch foe is lust." [38] At the very start, there must be no question as to which one is to rule. They cannot both endure.

Furthermore, the boy or man yielding to this temptation may contract one of the venereal diseases before mentioned. There have been so many lovely girls injured for life by these diseases that fathers and brothers of girls have begun to demand some assurance of the

young men whom their daughters and sisters marry that they are clean. A few states now require a certificate showing freedom from these diseases before a marriage license will be issued. Men who evade this law by getting a license in a neighboring state are likely to be either ignorant or vicious. They are not men whom most youths would want their sisters to marry.

It should be understood that sexual intercourse is not necessary to physical health. Ignorant men often hold that it is, and some doctors whose education is deficient may say that it is advisable. The best physicians condemn this doctrine. A few years ago, 360 of the foremost medical authorities of leading American universities signed a statement declaring that there is no evidence that abstinence is "inconsistent with the highest physical, mental, and moral efficiency." [39] Many who have been deceived by this false, out-of-date idea have found out later, at the expense of much suffering, that sexual intercourse has meant for them not health but disease. When a prize fighter is training for a fight and needs every bit of endurance and energy and courage he can command, his trainer keeps him away from anything of this kind. Thousands of fathers of healthy families have been as continent before marriage as the pure women they have married.

If passion or instinct at times seems insistent, let the youth hurry from the surroundings which tempt, and throw his whole life, body, mind, and soul, into a strenuous game, or into some other wholesome and absorbing activity, and he will find that passion is diverted and becomes a source of added energy, courage, and vigor in the activity into which he has, for the time, thrown his life.

When Ulysses' ship passed the Isle of Sirens, he had

himself tied to the mast so that he might not be enticed by the singing of the sirens. Orpheus was able to pass by this point of danger to Ulysses with obvious indifference, because he was able to produce such beautiful music as to make their music sound discordant. So, by cultivating wholesome interests, enthusiasms, and affections in their lives, men may crowd out base passions.

With some men, to live clean may mean hard fighting. Some seem to be handicapped by more passion than is given to most men. Fierce fighting, then, is the lot of such a youth. This may be, an unknown friend suggests, "the biggest fight ever waged by man — a fight in secret — without applause," a fight requiring self-control and will power, a determination not to yield till he can go joyfully and clean into marriage with the one woman he is willing to wait for.

Sex instinct, then, is a great blessing; it is not, if properly controlled, a destructive force in life, but a great constructive force given to the youth at the threshold of his manhood. Directed, this new force in the life of the youth brings richer and fuller life, greater capacity and power for love, and a quality of muscular strength, courage, energy, endurance, and will power not possible in early boyhood.

Attitude towards Womanhood.— A youth should regard all girls as the future mothers of the race and should join all mankind in paying homage to motherhood. The world owes a great debt to mothers. It bows in reverence before their self-sacrificing love.

It is a fine thing for a boy to associate with a winsome girl, but the association must be wholesome. A girl may inspire him to noble deeds and accomplishments. But familiarity breeds contempt, and sometimes worse things. The boy who boasts of the number

of girls he can fondle and kiss is far from being a gentleman. Such familiarity is dangerous. In the first place, it may excite passion in the boy to the point where he may then or later lose control of himself; secondly, it may excite passion in the girl to a dangerous point; thirdly, if neither boy nor girl is immediately harmed, at least the boy breaks down or helps break down the girl's modesty and reserve, which is one of her choicest assets, and thereby he may unknowingly prepare the way for some vicious scoundrel who will take advantage of her easy manner and ruin her life. A man is a coward who, by his conduct, makes it necessary for a girl to restrain her own sex impulses and his also. A youth should treat every girl as he expects other fellows to treat his own sister.

In an accident at sea, with crew and passengers hurrying to the life boats, the rule for every man is "women and children first." So careful are men to protect them from danger that they hold in contempt the coward who tries to save his own life ahead of the women and children. Consistency and sincerity demand that men should always protect womenkind from danger.

In order that boys may always be courteous and avoid urging girl friends to undertake sports and other activities which, at the time, may be injurious, they should understand that girls at about the age of thirteen also experience important changes in their lives. At this time, they pass from girlhood to womanhood; their forms change and the mother instinct comes into their lives. Then begins what is called the "monthly sickness" which lasts several days every month. During this period the girl is unusually sensitive to exercise and also to anything tending to irritate her. She needs more rest than usual. The chivalrous youth who

understands this will refrain from urging girl friends to undertake any activity when they prefer to be quiet.

The youth between the ages of fifteen and eighteen should think but little of marriage. He should center his attention upon developing a strong body and upon preparation for his life work. These things in themselves constitute fine preparation for marriage. One ideal, however, should be woven firmly into his very life, one principle should govern his daily conduct. Knowing the facts, the youth who is true to his manhood will resolve that he will give his future wife as clean a life as he expects in her. Though he may have but few principles, at least he believes in fair play and he despises cheating. As a matter of fair play, he will adopt for his own life the same standards he demands in the girl he will some day marry.

Thus it is seen that training is important, not only to the youth himself, but to his children, and his children's children. The spark of life is to be accepted as a sacred trust, to be transmitted undimmed to future generations. The youth's habits of life may determine the success or failure of many others.

CHAPTER V

THE YOUTH AND THE NATION

While specialized athletic training fits a youth for a place on a football, baseball, or track team, and while military training prepares him to fight for his country against external foes, a larger program of training fits him for the fight against enemies of the people within the nation. Disease, crime, and poverty are foes more dangerous and persistent than menacing armies. They cause destruction more serious than the devastations of war.

National Dangers Call for Virile Men. While strength of muscle, courage, self-control, determination, and endurance were demanded of great fighters in the World War and in other crises in history, these vital qualities are needed today in even higher degree for the warfare against disease, crime, and poverty.

During the fall and winter of 1918, there were more citizens in the United States killed by influenza than were killed in the war.[40] Of the 20,000,000 school children in the country today, 2,000,000 will die of tuberculosis, if they continue to die at the present rate.[41] There are as many feeble-minded persons in the United States today as there are students in the colleges and universities of the country.[42] Every day there are 1700 unnecessary deaths.[43] If a foreign enemy were to invade the country and kill in battle 1700 of our citizens

day after day, the fighting men of the nation would rise in defense of their fellow citizens and drive out the enemy.

Hundreds of boys in our great cities, deprived of legitimate play and recreation, seek adventure in petty forms of mischief, which often brings them into the Juvenile Court. Many are thus brought into contact with serious crime, and develop into professional criminals.

Children labor long hours in cotton mills, glass factories, and coal mines, deprived of the joys of boyhood and girlhood, even of proper nourishment and rest. In the coal breakers, boys bend over coal chutes for long hours, their backs aching as they pick out the slate and stone amid the dust and roar of the moving coal. In the cotton mills, girl "spinners" walk up and down long aisles, quickly tying threads together when they break. The work of boys in the glass factories of the East is particularly hard and injurious. Mr. Owen R. Lovejoy of the National Child Labor Committee several years ago calculated the work done by the boys whose task was to carry red-hot bottles from benches to oven. He found by counting the number of trips and the distance, that in eight hours they traveled nearly twenty-two miles, constantly on a slow run. Some of them were under twelve years of age, and for this work they were paid from sixty cents to a dollar per day.[44] While recent legislation has raised the age limit at which children can be employed, conditions are still serious.

In New York, a half million men, women, and children are crowded into ill-lighted and ill-ventilated rooms. In the high schools of that city, 160,000 students have been found who showed the marks of prolonged undernourishment.[45] There are great groups of

people, who throughout their lives have insufficient food, clothing, and shelter. They labor from childhood for the bare existence they are able to sustain. Savings for a rainy day, wholesome recreation, enjoyment of the world's achievements in literature and art, are out of the question. There are probably 10,000,000 persons in the United States living in poverty. In addition there are probably 5,000,000 dependent upon some form of public relief.[46]

These evils are not, as some uninformed people may say, "necessary evils." Reforms along these lines will doubtless be opposed by complacent people, especially by such capitalists as are becoming rich under present conditions. Opposition is to be expected. In the beginning of the nineteenth century, when little children were being driven by whips to the cotton looms, and when women worked in the coal mines, the owners insisted that proposed reform laws would ruin industry.[47] Slavery was formerly considered a necessary evil; many diseases were formerly considered necessary evils which today are either preventable or curable. So none of these other evils are "necessary evils." They are problems to challenge all the powers of the most vigorous and capable men the country can produce.

The world has been thrilled by the brave deeds of our fighters in France. They have shown ability and courage of high order. They have faced not only bullets, gas, and liquid fire, they have endured the mud and water, the vermin, the stench, the weariness, the enforced inactivity that try men's souls. The fight against the internal enemies of the nation seldom will be dramatic, most of it will be as monotonous as life in a military training camp. Only a few men will be called upon to die in action. Many will be required to render

a more difficult service. They will be called upon to live for their country, giving full years of active service, struggling against intricate, baffling problems. The war against disease, crime, and poverty requires ability and courage of a higher order.

The Relation of Training to This Warfare. The nation cannot carry on successfully the fight against crime, disease, and poverty without men who keep in training. William E. Gladstone was a man who trained and kept fit, thus enabling himself to serve his country in times of great need. Gladstone as a boy played cricket and football. His favorite recreation was boating. He was also a great walker, which he continued to be through life. In later life, pressed with the responsibilities of high office, in order to keep himself fit he gave a whole hour daily to exercise. As a man he was about middle height, broad-shouldered, and muscular. He had great physical strength and enjoyed remarkably good health. He was a man of brilliant intellect and wonderful capacity for work; he rendered great service to his country, and lived to the age of eighty-nine.

Lincoln, by keeping himself in condition, was able to meet tremendous demands upon his strength, and, by the power of his virility, meet dangers and solve problems which would have downed a weaker man.

So the youth must train not only for the sake of winning honors for his school, but in order that later he may be fit to take up the fight in one capacity or another against the dangers which threaten his nation. As the football games and other athletics of our colleges and high schools may be said to have developed in large degree the grit and tenacity that enabled the United States troops to change defeat into victory at

Chateau Thierry, so may vigorous athletics and conscientious training in times of peace serve our youth well in later years as they take up the battles of citizenship.

Various Types of Service. There are numerous ways in which men may carry on the fight against the nation's internal enemies. First, men are needed in the professions. In the days before the value of fresh air was recognized in the cure and prevention of tuberculosis Dr. Edward Livingston Trudeau, in the face of criticism and ridicule, established in the Adirondacks a fresh air sanitarium. His success in treating tuberculosis by the open-air and rest method soon attracted wide-spread attention, other sanitariums sprang up, and today there are fully five hundred in the United States and Canada. Edward Trudeau taught the world the value of fresh air.[48]

Lord Lister discovered the value of antiseptics. By keeping secret his discovery he might have made himself wealthy, but he gave it to the world. His discovery has been a greater agency in saving life than anything else in the treatment of surgical disease. In the medical profession no man is considered in good repute who patents any instrument, device, or drug. He is expected to give what he discovers, as soon as its value is demonstrated, freely to the world.

Jacob A. Riis became one of New York's most useful citizens as a newspaper reporter. He exposed the conditions of New York City's water supply, which might have caused a serious epidemic of typhoid fever, and brought about the installation of a new system. He threw his life into a fight against the slum with all its evils, and a dozen blocks of the foulest tenements in the city were destroyed. One of the worst of these blocks was turned into a park. He worked against the use of

police stations as lodging houses and against child labor. Riis believed in the power of fact and in the goodness of the people. As a newspaper reporter he brought the facts before the people and reform resulted. Much of the time he fought almost single-handed, but he was right, and because he fought faithfully and would not give up, he won out.[49]

Secondly, men are needed in the world of business, not to get rich at any cost, but to render definite service. He who employs men and women under wholesome and cheerful surroundings to manufacture a useful product, who pays them fair wages and sells the product of their labor to the public at a fair profit, without adulteration or short weight, renders such a service. He who will not pay a living wage, who provides quarters for his employees not fit for live stock, who sells at exorbitant profits products grossly misrepresented and detrimental to health and life, is much worse than a bad citizen. He is a robber, perhaps a murderer, and should be so regarded by the law.

George Peabody was a successful business man who devoted his money to the common good. He became a big wholesale merchant in America, and in 1837, at the age of forty-two, established himself as a banker in London. There he made a great fortune. A large proportion of it he gave to colleges and churches in America and to improve the condition of the poor in London. He tore down blocks of miserable tenements and built model homes in which people could live decently at reasonable expense.[50]

Charles M. Cox, a grain dealer, directed his business on the basis of the Golden Rule. After a severe illness he went back to business with ideals considered by some men revolutionary. He called his employees together in

his office, divided the business among them, and organized a cooperative company in which every man held some stock. The business became more efficient. Cox, himself, made money and used much of it for the community. He built for the children of his home town a swimming pool. He supplied the ground for a playfield. He became the friend of everyone in the town. "If you want efficiency," he says, "make your men happy. *Give them what you want yourself.*" [51]

In the third place, men are needed in agriculture and industry. The producer, artisan, and laborer have essential functions in the great field of commerce and trade. Men are needed on the farm to produce the world's food, in the mines and forests to take other forms of wealth from the earth; artisans and merchants are needed in shop and factory, in city and country, as we strive for national progress.

William Carr, an engineer, was in charge of a passenger train running between New York and Philadelphia. When about forty miles from New York, the steam chest exploded and instantly enveloped him in scalding steam and water. His agony must have been intense, but his mind worked clearly; he was able instantly to throw on the emergency brakes and close the throttle before falling unconscious to the floor. So strong was his sense of responsibility that, when danger came, his mind worked almost automatically. William Carr combined two qualities; a feeling of responsibility and a love for his work. These qualities lift work above drudgery, make it a pleasure, and bring to life a deep satisfaction.[52]

All honor is due the man who creates and produces wealth by the sweat of his brow. The man who goes through life living off the earnings of his father or other

relative without any attempt to make himself useful is a parasite. Incidentally, it may be said that many of the best all-round boys in high school are those who are not afraid of work, but get out into the fields at harvesting time, into factories, and into any honest labor which will pay them in experience and money, whether or not their education depends upon their earning their expenses.

Finally, men are needed in public service. John M. Eshleman gave himself a high school education by lantern light and became one of the leaders of the reform minority in the California Legislature of 1907. He introduced the first bill against race-track gambling and thereby incurred the hostility of the railroad machine, which was allied with the race-track machine. Eshleman was an office seeker who wanted nothing but an opportunity to serve, a railroad-machine destroyer who was so scrupulously just to the railroads that they never appealed from his decisions, a student who never lost touch with the people, a reformer who knew no cant, a big-souled man whom a whole state loved.[53]

John R. Mott, General Secretary of the International Committee of the Young Men's Christian Associations, is the head of hundreds of the greatest men-making factories in the world — the "Y's" of North America. Mr. Mott has rare executive capacity. Although his responsibilities have grown immensely year by year, he is usually ahead of his work. His capacity for steady work at high pressure is so great as to wear out any associate who tries to keep pace with him. Though he was ranked high as a student of philosophy in college, he is primarily a man of will and of action. He reads the biographies of great generals, whose strategy he tries to match in the field of organized religion. Mr. Mott's

field of activity is the entire world. He has traveled around the world at least five times, and has made many other trips to South America, South Africa, and Asia. His recent book, "The Present World Situation," calls upon the Church to prove itself equal to the present world crisis.[54]

Many men formerly entered politics for what they could get out of it. Fortunately, men are now entering public life with higher motives. Brand Whitlock, the United States Ambassador in Belgium, was Mayor of Toledo for several terms. Writing was the vocation of his choice. But his training made him a valuable executive, and he was willing to serve. Charles E. Merriam, Professor of Political Science at the University of Chicago, has had a training which peculiarly fits him for active work in city government. He became a member of the city council in Chicago because of the service he could render. Men of this kind are needed in public life.

Choosing a Vocation. The youth who is keeping himself in training for a life of useful service should be careful not to handicap his usefulness by drifting into his life work. A man's vocation or life work should be deliberately and carefully chosen in reference, first, to the opportunities in various fields, and second, to his own adaptability. After a vocation is chosen, thorough preparation should be achieved although it may require sacrifice. This may mean a college course, and sometimes a professional course in addition.

None but the serviceable man can rightfully be called successful. A college education is largely a gift from society. Students pay only a small proportion of its cost. The man who uses his college education for selfish ends is not even playing fair. The most suc-

cessful college men are those who go out from college to give their lives to the struggle against the social evils which threaten the nation.

A Call to Action. The war has aroused many persons from selfish and frivolous living. Many of us, however, who have clean, comfortable homes with wholesome food, fresh air, rest and recreation in abundance, who see nothing of crime, who are in robust health — we know little of the sordidness, the misery, caused by poverty, crime, and disease. We live in a little world of petty concerns and pleasures. We are blind to the throbbing life of humanity. Indifference is prevalent. Many are not able to see through outward signs of prosperity to the misery at the heart of society. Others, in their ignorance, think that people live sordid lives because they do not want to live differently. Some are indifferent because they lack the mental and spiritual capacity to look seriously upon life. A few, at some time in their lives, come into direct contact with human misery, but they have not the courage to face it. They turn aside. They ignore the misery of the world and live selfish lives because they are cowards.

Our failure to grapple effectively with disease, crime, and poverty is not due to lack of power. No civilization in history has had such great resources as has our nation. Never has there been so much wealth and human energy in any country as there is today in the United States.

The inventive genius, the organizing ability, and the energies of thousands of men in America are given over to the upbuilding of huge commercial enterprises which yield vast fortunes for their promoters. We have wealth and power to spare. During the first five months of the European war, the British Admiralty received 16,000

offers of new scientific devices for use in the war.[55] The inventive genius, the organizing ability, and the energies of thousands of the best trained men of the world were given over to the science of warfare. The wealth of nations was placed at the command of the warring nations. Their armies, even in time of peace, consumed millions of dollars annually. They developed marvelous efficiency.

If the same wealth, the same inventive genius, the same organizing ability, and the same energies were directed in a great campaign against poverty, disease, and crime, these enemies might be almost annihilated within a period of twenty-five years. The great social evils of the present day are no more necessary than was slavery or yellow fever. Yet no nation has yet directed its full strength in a campaign against them.

Today the nation calls for its youth. Young men of action are wanted; men who will take arms against the nation's enemies, men who will take risks and make sacrifices. We must confer of course, we must weigh issues; study is essential. We must not study less, but we must act more. Words are discounted; they are losing their force because they have been used so glibly. To prove that we are sincere, we must do less talking and more acting. What if we do make mistakes? What if we are defeated? What if we do die, if it is for the cause of humanity? Is it not better to die fighting for a noble cause than to live soft, useless lives of cowardly and passive enjoyment? "Work is life, idleness is death." True happiness is in action, in struggling, in strenuous endeavor.[56]

Disease, crime, and poverty thrive because they are treacherous enemies; they have been insidiously de-

veloping; they fight in the dark. Our energetic and courageous youth, in business, high school, and college, have hardly seen them, so stealthily do they go about their work. But when these enemies of mankind are pointed out to our young men, their fighting strength will assert itself. They will enlist; and then we may look for a better day.

Students of history realize that the United States of America faces grave dangers which threaten the success of the Republic. Other great nations have risen and endured for three to five hundred years, and have succumbed to decay from within and their enemies from without. Our nation is still in its youth; it is less than one hundred and fifty years old. Will it endure? One of our great men of the present day asks, Will some historian of another race "sit by the shore of the Pacific in the year A. D. 3000 and write on 'The Decline and Fall of the Christian Empire'? If so, he will probably describe the nineteenth and twentieth centuries as the golden age when outwardly life flourished as never before, but when decay was already far advanced." [57]

Formerly man looked upon these enemies from afar. Now, he has grappled with them for a fight to the finish. Started by a few vigorous, determined men, the fight is being waged with increasing enthusiasm. The ranks are being constantly increased by young men from the colleges and universities equally vigorous and determined. Some have given their lives in the fight, but others have taken their places. Companies of recruits are in training for field work. Brave generals with armies of seasoned men are already in action. Social engineers are planning state-wide and country-wide cam-

paigns. If a sufficient number of men enlist, disease, crime, and poverty as menacing enemies of the nation, will be conquered in the next generation.

The World War called for brave men to die for their country. Today, brave men are needed to live for their country. A higher type of patriotism is required than ever before. Men of strong muscle, endurance, courage, self-control, and determination, men who have conserved their strength, men who have trained and who have kept themselves fit, are now wanted to take up the fight against the dangers which threaten us from within, that our nation may endure and realize in some degree the hopes of mankind.

SELECTED BOOKS

Training and Virility

Michael C. Murphy: Athletic Training.
Fisher and Fiske: How to Live.
Samuel Hopkins Adams: The Health Master.
Charles Lynch: First Aid to the Injured.

Virility in Fiction and Verse

Winston Churchill: The Crisis; A Far Country.
Ralph Connor: The Doctor.
Peter B. Kyne: The Three Godfathers.
William Allen White: A Certain Rich Man.
Henry Sydnor Harrison: V. V.'s Eyes.
Rudyard Kipling: The Brushwood Boy.
John Galsworthy: Strife (Drama).
Wilfred Wilson Gibson: Fires (Verse).
David R. Porter: Poems of Action.

Virility in Real Life

Jacob A. Riis: The Making of an American.
Alexander Irvine: From the Bottom Up.
Ben B. Lindsey and Harvey J. O'Higgins: The Beast.
Booker T. Washington: Up From Slavery.
Brand Whitlock: Forty Years of It.
John Graham Brooks: An American Citizen.
Howard A. Kelley: Walter Reed and Yellow Fever.
S. Ralph Harlow: The Life of H. Roswell Bates.
Stephen Chalmers: The Beloved Physician.
Ida M. Tarbell: New Ideals in Business.
William Carleton: One Way Out.
Wilfred S. Grenfell: Adrift on an Ice-Pan.
F. H. Cheley: Told by the Campfire.

Choosing a Vocation

William De Witt Hyde: The Young Folks Library of Vocations.

Weaver and Byler: Profitable Vocations for Boys.

F. W. Rollins: What Can a Young Man Do.

Salaried Positions for Men in Social Work (Student Department, International Committee, Young Men's Christian Association, 347 Madison Avenue, New York City).

Orrin G. Cocks: Engagement and Marriage.

This little book will not be of much interest to youths, but is mentioned here as a book to which they may turn later for sound advice regarding marriage. It discusses in clear, concise style such questions as the age of marriage, what it costs, relationship of engaged couples, care of wife before childbirth, and living with relatives.

NOTES

[1] Report of the Provost Marshal General on the First Draft, p. 44.

[2] Cf. Dudley A. Sargent, A.M., M.D., S.D.: Physical Education, Ginn & Co., p. 297.

[3] Cf. Luther H. Gulick, M.D.: The Efficient Life, Doubleday, Page & Co., p. 181.

[4] Robert E. Speer: Young Men Who Overcame, Fleming H. Revell Co., pp. 81–94.

[5] Speer: Young Men Who Overcame, pp. 20–30.

[6] See article by Dr. Charles W. Eliot in Ladies' Home Journal, April, 1914.

[7] Ida M. Tarbell: The Early Life of Abraham Lincoln, S. S. McClure, Ltd.

[8] The Uttermost South. The Undying Story of Captain Scott, from his diaries; Everybody's Magazine, July to October, 1913.

[9] Cf. Sargent: Physical Education, pp. 136–139.

[10] Cf. Sargent: Physical Education, p. 296.

[11] Louis J. Cooke, M.D.: Manual of Personal Hygiene, H. W. Wilson Co., Minneapolis, p. 32.

[12] Sargent: Physical Education, p. 139.

[13] Report of Dr. Robert Bartholow on "The Various Influences Affecting the Physical Endurance, the Power of Resisting Disease, etc., of the Men Composing the Volunteer Armies of the United States."

[14] Cf. Samuel Hopkins Adams: The Health Master, Houghton Mifflin Co., p. 52.

[15] Leonard P. Ayres, Ph.D.: Open Air Schools, Doubleday, Page & Co.

[16] The Survey: December 6, 1913, pp. 232–233.

[17] Josephine Goldmark: Fatigue and Efficiency, Charities Publication Committee, Part II, p. 193.

[18] Cf. Gulick: The Efficient Life, pp. 4 and 10.

[19] William Blaikie: How to Get Strong and How to Stay So, Revised Edition 1902, Harper & Bro., p. 53.

[20] From Letters from the C. & B. Transportation Co., Cleveland, Ohio, and the White Star Line, Detroit, Mich.

[21] Francis Gulick Jewett: The Next Generation, Ginn & Co., pp. 136–144.

[22] Cf. Winfield Scott Hall: From Youth into Manhood, Association Press, New York, pp. 56–58.

[23] Irving Fisher: National Vitality, Its Wastes and Conservation; Senate Document No. 419, 61st Congress, 2d Session, p. 656.

[24] Adams: The Health Master, pp. 258–265.

[25] Professor William L. Hooper, Acting President of Tufts College, Massachusetts; an article on Colds, The Journal of Outdoor Life, March, 1914.

[26] Cf. Hall: From Youth into Manhood, p. 91.

[27] Irving Fisher: Memorial Relating to the Conservation of Human Life; Senate Document No. 493, 62d Congress, 2d Session, p. 9.

[28] Prince A. Morrow, M.D.: Social Diseases and Marriage, Messrs. Lea Brothers & Co., pp. 21, 22 and 26, 27.

[29] Cf. Hall: Reproduction and Sexual Hygiene, Fourteenth Edition, Wynnewood Publishing Co., pp. 48–65.

[30] Max J. Exner, M.D.: The Rational Sex Life for Men, The Association Press, p. 77.

[31] Jewett: The Next Generation, p. 4. See also R. L. Dugdale: The Jukes, Seventh Edition, G. P. Putnam.

[32] Jewett: The Next Generation, p. 3. See also A. E. Winship: Jukes-Edwards, A Study in Education and Heredity, R. L. Myers & Co., Harrisburg, Pa.

[33] Adapted from diagrams in Galloway's The Biology of Sex, D. C. Heath & Co., New York.

[34] Cf. Nellie M. Smith, A.M.: The Three Gifts of Life, Dodd, Mead & Co.

[35] Jewett: The Next Generation, Ginn & Co., pp. 72, 73.

[36] Charles E. Stockhard: The Effect on the Offspring of Intoxicating the Male Parent and the Transmission of the Defects to Subsequent Generations, The American Naturalist, Vol. 47, No. 563, pp. 641–682.

[37] Journal of the American Medical Association, April 3, 1915, p. 1141.

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[39] M. J. Exner, M.D.: The Physician's Answer, Association Press.

[40] Survey, November 16, 1918, p. 194.

[41] Lewis M. Terman: Medical Inspection, Chap. 14, Report of the Survey of the Public School System of School District No. 1, Multnomah County, Oregon, 1913, p. 260.

[42] Goddard: Feeble-mindedness, Its Causes and Consequences, The Macmillan Co., p. 582.

[43] Fisher: National Vitality, Its Wastes and Conservation, Senate Document No. 419, 61st Congress, Second Session, p. 656.

[44] John Spargo: The Bitter Cry of Children.

[45] The New Republic, April 21, 1917, Vol. 10, No. 129, p. 339.

[46] Jacob H. Hollander: The Abolition of Poverty, Houghton Mifflin Co., p. 9.

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[47] Walter Rauschenbusch: Christianity and the Social Crisis, The Macmillan Co., p. 351.

[48] Stephen Chalmers: The Beloved Physician, Edward Livingston Trudeau, Houghton Mifflin Co.

[49] Jacob A. Riis: The Making of an American, The Macmillan Co.

[50] Harvey L. Smith: The Christian Race, Association Press.

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[52] The Outlook, December 6, 1913.

[53] The Fresno (Cal.) Morning Republican, Feb. 29, 1916.

[54] Galen M. Fisher: John R. Mott, An Appreciation, Japanese Young Men's Christian Association Union, Tokyo, 1907.

[55] New York Times, July 20, 1915.

[56] Charles Wagner: Youth, Dodd, Mead & Co., pp. 182–191.

[57] Rauschenbusch: Christianity and the Social Crisis, p. 285.

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